

STEPHEN D. STEWART

	Page		Page
Safety Precautions.....	1-2	Block Diagram	1-12
Warning	1-2	Internal Block Diagrams of ICs.....	1-13
Specifications.....	1-3	Connection Diagram	1-14
Instruction Book	1-4	Schematic Diagrams	Insertion
Removal Procedures.....	1-10	Printed Circuit Boards.....	Insertion
Adjustment Procedures	1-11	Parts List.....	Separate Volume Insertion

Safety Precautions

1. The design of this product contains special hardware and may circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the product have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (Δ) on the Parts List in the Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the Parts List of Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembly.
5. Leakage current check (Electrical shock hazard testing)
After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.

Do not use a line isolation transformer during this check.

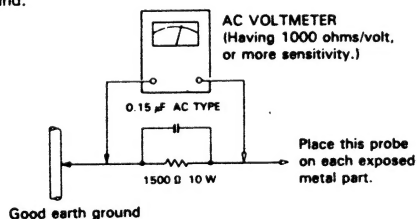
- Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5 mA AC (r.m.s.).

Alternate check method

Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500 Ω 10 W resistor paralleled by a 0.15 μ F AC-type capacitor between an exposed metal part and a known good earth ground.

Measure the AC voltage across the resistor with the AC voltmeter.

Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).



Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

Specifications

AX-611BK

OVERALL CHARACTERISTICS

Output power:

140 watts per channel into 4 ohms at 1 kHz (DIN).

90 watts per channel into 8 ohms at 1 kHz (DIN).

85 watts per channel, min. RMS, both channels driven, into 8 ohms from 20 Hz to 20 kHz, with no more than 0.007% total harmonic distortion. (U.S.A. and Canada only)

85 watts per channel, min. RMS, both channels driven, into 8 ohms at 1 kHz with no more than 0.003% total harmonic distortion. (measured by JVC Audio Analyzer System)

Total harmonic distortion	0.007% (20 Hz — 20 kHz, 8 ohms) at 85 watts
Intermodulation distortion	0.007% (60 Hz : 7 kHz + 4 : 1, 8 ohms) at 85 watts
Power band width	5 Hz — 50 kHz (IHF, 0.05%, 8 ohms both channels driven)
Frequency response	5 Hz — 80 kHz + 0, — 3 dB (8 ohms)
Damping factor	90 (1 kHz, 8 ohms)
Input terminals	
Input sensitivity* impedance (1 kHz)	
PHONO (MM)	2.5 mV/47 kohms
PHONO (MC)	200 μ V/100 ohms
CD/AUX/	200 mV/43 kohms
TUNER/TAPE 1, 2	
Signal-to-noise ratio	
PHONO (MM)	85 dB ('66 IHF)
PHONO (MC)	66 dB ('66 IHF)
CD/AUX/	104 dB ('66 IHF)
TUNER/TAPE 1, 2	
PHONO (MM)	81 dB ('78 IHF)
(REC OUT)	
PHONO (MC)	73 dB ('78 IHF)
(REC OUT)	
CD/AUX/	76 dB ('78 IHF)
TUNER/TAPE 1, 2	
(SP OUT)	
PHONO (MM)	67 dB (DIN)
CD/AUX/	68 dB (DIN)
TUNER/TAPE 1, 2	
Tone controls	TREBLE: +8 \pm 1 dB — 8 \pm 1 dB (at 10 kHz)
	BASS: +8 \pm 1 dB — 8 \pm 1 dB (at 100 Hz)
Loudness controls	+6 dB (at 100 Hz)
(Volume control at — 30 dB position)	

EQUALIZER

PHONO overload capacity
 PHONO (MM) : 100 mV (0.02% THD)
 PHONO (MC) : 8 mV (0.04% THD)
 PHONO RIAA deviation
 PHONO (MM) : ± 0.3 dB (20 Hz — 20 kHz)
 PHONO (MC) : ± 0.5 dB (20 Hz — 20 kHz)

Recording output
 Output level/impedance
 TAPE REC-1, 2 : 200 mV/Maximum 1 kohms

GENERAL

Dimensions : 435 (W) x 147 (H) x 356 (D) mm
 (17-3/16" x 5-13/16" x 14-1/16")

Weight : 10.2 kg (22.5 lbs.)

Design and specifications subject to change without notice.



OPEN-AIR STEREO HEADPHONES HA-CD7
 The JVC HA-CD7 Open-Air high-quality Stereo Headphones (optionally available) are recommended for use with this unit.

POWER SPECIFICATIONS

Areas	Line voltage & frequency	Power consumption	
			AX-611BK
U.S.A.	AC 120 V ~, 60 Hz		440 watts/ 560 VA
Canada			
U.K.	AC 240 V ~, 50 Hz		770 watts
Australia			
Continental Europe	AC 220 V ~, 50 Hz		320 watts
Other areas	AC 110/127/220/240 V ~ selectable, 50/60 Hz		

TROUBLESHOOTING

What appears to be a malfunction may not always be serious.
 Make sure first

No sound and no light

Is the AC plug connected properly?
 Are the connections made correctly?

No sound from speakers

Are speaker cords connected?
 Are the SPEAKERS buttons correctly set?
 Is the VOLUME control properly set?
 Is your source component correctly set?

Sound from one speaker only

Are speaker cords connected correctly?
 Is BALANCE control set to one extreme or the other?

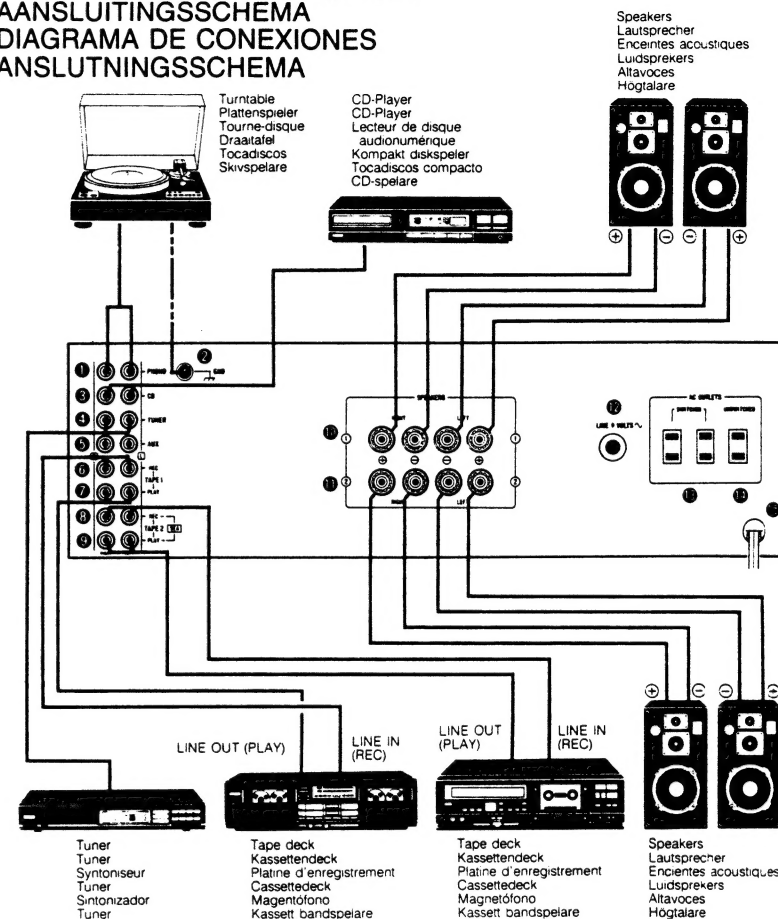
Loud hum during record playing

Is turntable grounded?
 — Try to change cord path.

Howling noise during record playing

Is turntable too close to a speaker?

CONNECTION DIAGRAM
ANSCHLUSSDIAGRAMM
SCHEMA DE RACCORDEMENTS
AANSLUITINGSSCHEMA
DIAGRAMA DE CONEXIONES
ANSLUTNINGSSCHEMA

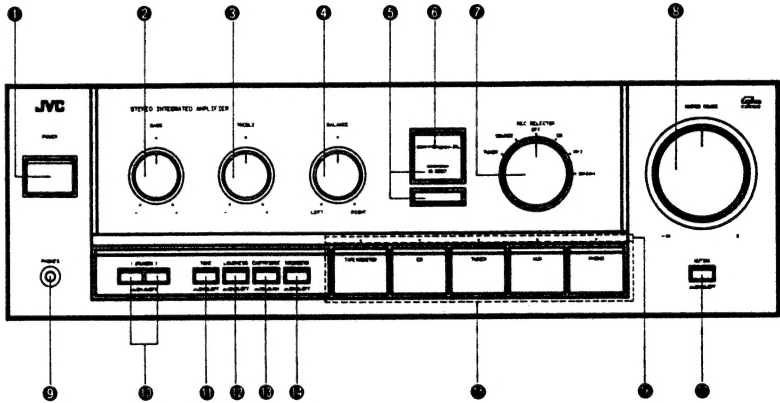


REAR PANEL

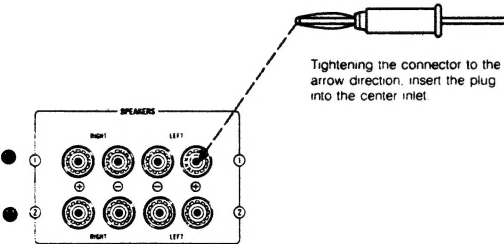
- PHONO terminals
 - GND terminal
 - If your turntable has a ground lead, connect it to the GND terminal
 - CD terminals
 - TUNER terminals
 - AUX terminals
 - TAPE 1 REC terminals
 - TAPE 1 PLAY terminals
 - TAPE 2 REC terminals
 - TAPE 2 PLAY terminals
 - SPEAKERS 1 terminals
 - SPEAKERS 2 terminals
 - AC line voltage selector (LINE 1 VOLTS ~)
 - SWITCHED AC OUTLETS**
 - UNSWITCHED AC OUTLET**
 - Power cord
- (*Not provided on units for U.S.A., Canada, Continental Europe, the United Kingdom and Australia.)
- (**Not provided on units for Continental Europe, the United Kingdom and Australia.)

- Notes:
1. Switch the power off when connecting any component.
 2. Connect source components with left and right channels connected correctly. Reversed channels may degrade the stereo effect.
 3. Connect speakers with correct polarity; (+) to (+) and (-) to (-). Reversed polarity may degrade the stereo effect.
 4. Connect plugs or wires firmly. Poor contact may result in hum.
 5. Do not connect the power plugs of components which have a total power consumption exceeding the value indicated on the rear panel.
 6. Use speakers with the correct impedance. The correct impedance is indicated on the rear panel of the AX-511BK/AX-611BK.
 7. The SWITCHED AC outlets are switched off when the front-panel POWER button is switched off.
 8. The UNSWITCHED AC outlet is not switched off when the front-panel POWER button is switched off.

FRONT PANEL
FRONTPLATTE
PANNEAU AVANT
VOORPANEEL
PANEL DELANTERO
FRAMPANEL



Connecting to speaker terminals with BANANA plug.
(Only for USA and Canada)



FRONT PANEL

These instructions are prepared for two models: AX-511BK/AX-611BK.
Therefore, read the items below concerning each model.

● POWER

Press this button to turn the power on.
To turn the power off, press it again.

Notes:

- When power is not supplied to this amplifier for 2 — 3 days, the source select button pressed before the power was switched off may be lost when the power is switched on again. If this happens, set the buttons, etc. again.
- An electronic source selector is used in this unit. When the POWER button is first switched on, two or more sources or no source may be selected. Make sure to input the source select data by pressing one of the source selectors.
- If the POWER button is pressed repeatedly to switch on and off too quickly, the same phenomenon as the above will occur.

● BASS

Turn clockwise to boost bass response and counterclockwise to decrease it.

● TREBLE

Turn clockwise to boost treble response and counterclockwise to decrease it.

● BALANCE

Balances the volume between the left and right speakers. Usually set it to the center click position.

● CD DIRECT and indicator

Press this button to enjoy listening to the CD with good sound quality. The indicator lights and the signal fed from the CD terminals is directly connected to the volume, bypassing the circuits on the way, thus allowing you to enjoy listening to an improved sound quality.

Note:

- While the CD DIRECT button is pressed, the reproduced sound does not change even if the source selector (including TAPE 2 MONITOR) and BALANCE volume are operated, press the CD DIRECT button again to turn the indicator off when using these.

● CD DIRECT indicator

Pressing the POWER button to on, this indicator lights.

● REC SELECTOR

TUNER: Set to this position to record broadcasts while listening to another source.

SOURCE: Set to this position to record from sources connected to the PHONO, CD, TUNER or AUX terminals.

OFF: Set to this position when you are not recording or dubbing.

CD: Set to this position to record CD while listening to another source.

1 ► 2: Set to this position to dub from the deck TAPE 1 to TAPE 2.

S ► 2 ► 1: Set to this position to dub from the deck TAPE 2 to TAPE 1 and record the source selected with the SOURCE SELECTOR onto the deck TAPE 2.



● MASTER VOLUME

Controls the volume of the speakers and headphones.


● PHONES (Headphones jack)


Plug stereo headphones into this jack for private listening.
If you want to listen to sound from the headphone only, press the SPEAKERS buttons to "OFF".

● SPEAKERS


Press to switch the speakers connected to the SPEAKERS 1 or 2 terminals on () and off ().


● TONE

ON (): Press to adjust the tone with the BASS and TREBLE controls.


DEFEAT (): Press to this position to obtain a standard (flat) frequency response.


● LOUDNESS

ON (): To compensate for the ear's lower sensitivity at low listening levels.



OFF (): To bypass the LOUDNESS circuit.

● CARTRIDGE

MC (): Press in when using an MC cartridge having an output of less than 0.5 mV.

MM (): Press again when using an MM or MC cartridge having an output of more than 0.5 mV.

● TAPE 2 MONITOR

ON (): Set to this position to listen to the tape deck connected to the TAPE 2 terminals of this unit. If your tape deck is of the 3-head type, you can monitor the recorded sound while recording by setting this button to ON.
OFF (): Keep this button set to this position except when you want to listen to the tape deck connected to the TAPE 2 terminals of this unit.

● Source selector TAPE 1 MONITOR

Press to listen to a tape deck connected to the TAPE 1 terminals.

CD

Press to listen to the source connected to the CD terminals.

TUNER

Press to listen to radio broadcasts by a tuner connected to the TUNER terminals.

AUX

Press to listen to the source connected to the AUX terminals.


PHONO


Press to listen to records played by a turntable connected to the PHONO terminals.

● Source indicator

The indicator corresponding to the source select button pressed lights.

● MUTING (AX-611BK only)

ON (): Press to mute the sound (−20 dB). Use this button when answering the telephone, for example.

OFF (): Press again to return the volume level to that adjusted with the MASTER VOLUME control.

OPERATION


Before operation, always be sure to set VOLUME at minimum.

When the volume is increased after selecting a source position with no equipment connected to the input terminal, other connected devices (such as speakers) may be adversely affected by external noise and inductive hum.


Listening to broadcasts

1. Connect a tuner to the TUNER terminals on the rear panel.
2. Press the POWER button on.
3. Press the TUNER button and make sure that the TAPE 1 MONITOR and TAPE 2 MONITOR buttons are set to off.
4. Select the speaker system with the SPEAKERS switches.
5. Operate the tuner according to its instruction manual.
6. Adjust the VOLUME, LOUDNESS, BALANCE and BASS/TREBLE controls.

Listening to records

1. Connect a turntable to the PHONO terminals on the rear panel.
2. Press the POWER button on.
3. Set the CARTRIDGE  button of this unit according to the cartridge in use.
4. Press the PHONO button and make sure that the TAPE 1 MONITOR and TAPE 2 MONITOR buttons are set to off.
5. Select the speaker system with the SPEAKERS switches.
6. Operate the turntable according to its instruction manual.
7. Adjust the VOLUME, LOUDNESS, BALANCE and BASS/TREBLE controls.

Listening to tapes

1. Connect a tape deck to the PLAY terminals of TAPE 1 or TAPE 2.
2. Press the POWER button on.
3. Press the TAPE 1 MONITOR button to play back the TAPE 1 deck. For playback of the TAPE 2 deck, press the TAPE 2 MONITOR button to ON ().
4. Select the speaker system with the SPEAKERS switches.
5. Operate the tape deck for playback according to its instruction manual.
6. Adjust the playback sound controls as required.

Note:

- Do not place the tape deck directly on the amplifier, because it may cause the amplifier to malfunction.

Using stereo headphones

Stereo headphones can be plugged into the front panel jack. Plugging headphones into the PHONES jack does not switch off the speaker sound.

Recording tapes

— Recording from records —

1. Connect a tape deck to the REC terminals of the TAPE 1 or TAPE 2 terminals.
2. Press the POWER button on.
3. Select a speaker system if you wish to hear the sound while recording.
4. Press the PHONO button.
5. Operate the turntable.
6. Operate the tape deck for recording.

— Recording from other sources (TUNER, CD, AUX)

Press the TUNER, CD or AUX button to record radio broadcasts, or the source connected to the CD, AUX terminals.
All other operations are identical to when recording from disc source.

Note:

- To record from CD, turn the source selector to "CD". It is possible to monitor the high quality sound by pressing the CD DIRECT button. When monitoring other sources while recording, press the CD DIRECT button again to turn the indicator off.

— Recording from other sources (PHONO, TUNER, AUX) while listening to the CD —

1. Select the source that you wish to record to from among the PHONO, TUNER and AUX button.
2. Operate the tape deck for recording.
3. Press the CD DIRECT button.

Tape dubbing

Dubbing from the TAPE 1 to TAPE 2 is carried out as follows:

1. Press the TAPE 1 MONITOR button.
2. Play back the TAPE 1 deck.
3. Operate the TAPE 2 deck for recording. You can perform tape dubbing while listening to the CD by pressing the CD DIRECT button in addition to the above operations.

Notes:

- The sound you hear from the speakers or headphones is the source sound, not that being recorded on the tape.
- The VOLUME control of this amplifier has no effect on the recording level. Adjust the recording level with the controls on the tape deck.

How to operate the monitor while recording on the tape deck

1. Connect a 3-head tape deck to the TAPE 1 or TAPE 2 terminals.
2. Make sure to connect the signal cords to the PLAY and REC terminals.
3. Select the source from which you want to record by depressing the source select button on this unit.
4. Operate the tape deck for recording as described in its operating manual.
5. By playing the source component, you can record on the tape deck.
6. While recording on the tape deck, the recorded sound can be heard by depressing the TAPE 1 MONITOR or TAPE 2 MONITOR button on this unit.

Use of S.E.A. Graphic Equalizer

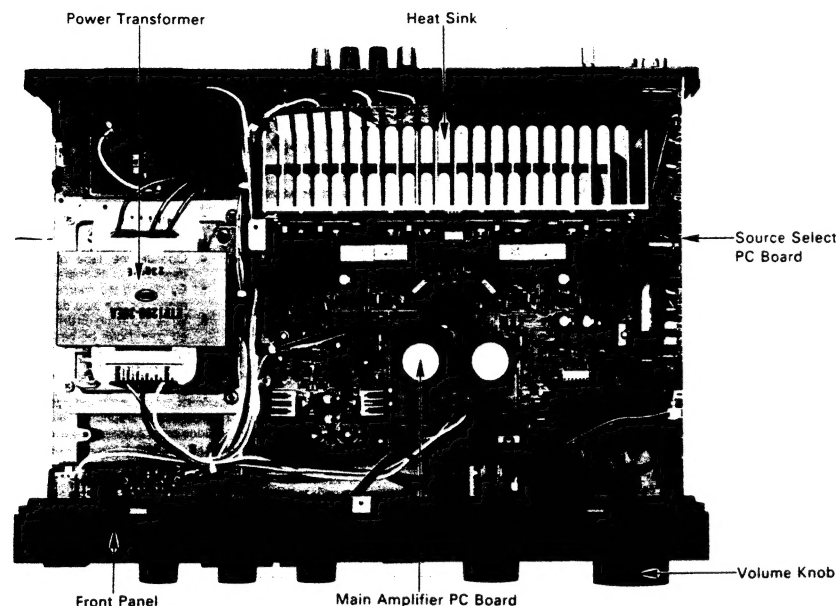
The S.E.A. Graphic Equalizer is JVC's exclusive tone control system. By allowing you to independently boost or lower the response of finely divided sections of the frequency spectrum, the S.E.A. gives you much greater control over the sound quality of your stereo system. With an optionally available S.E.A. Graphic Equalizer, you can tailor the sound to your own taste for different types of music or to compensate for the particular acoustic characteristics of your audio components and listening room.

The TAPE 2 terminals of the AX-511BK or AX-611BK can be used for connecting the S.E.A. Graphic Equalizer.

Note:

- Even if the S.E.A. Graphic Equalizer is operated while the CD DIRECT button is pressed, reproduced sound is neither adjusted nor compensated. When using the S.E.A. Graphic Equalizer, press the CD DIRECT button once again to turn the indicator off.

Removal Procedures



■ Removing the Top Cover

1. Remove six screws.
2. Remove the top cover by lifting up its rear section and pulling it backward while holding it on incline.

■ Removing the Front Panel

1. Remove the top cover.
2. Pull out the volume knob.
3. Remove three plastic rivets on the upper part of the front panel and three screws from the lower part.

■ Removing the Bottom Cover

1. Remove 19 screws fixing the bottom cover.

■ Removing the Source Select PC Board

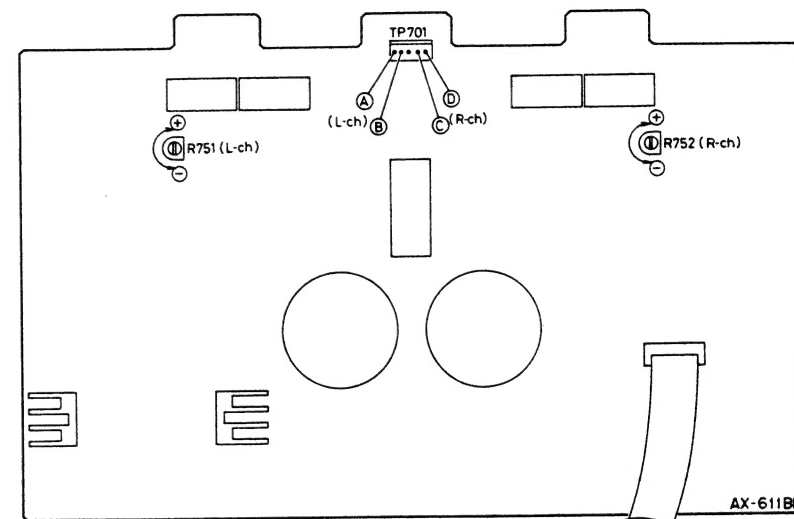
1. Remove the top cover.
2. Remove four screws fixing the pin jacks.
3. Remove the fastener from the source select pc board.
4. Pulling the source select pc board toward you.

■ Removing the Power Transistors

1. Remove the top cover.
2. Remove the bottom cover.
3. Remove the retaining screw from the defective power transistor and replace it.

Adjustment Procedures

■ Power Amplifier Idling Adjustment



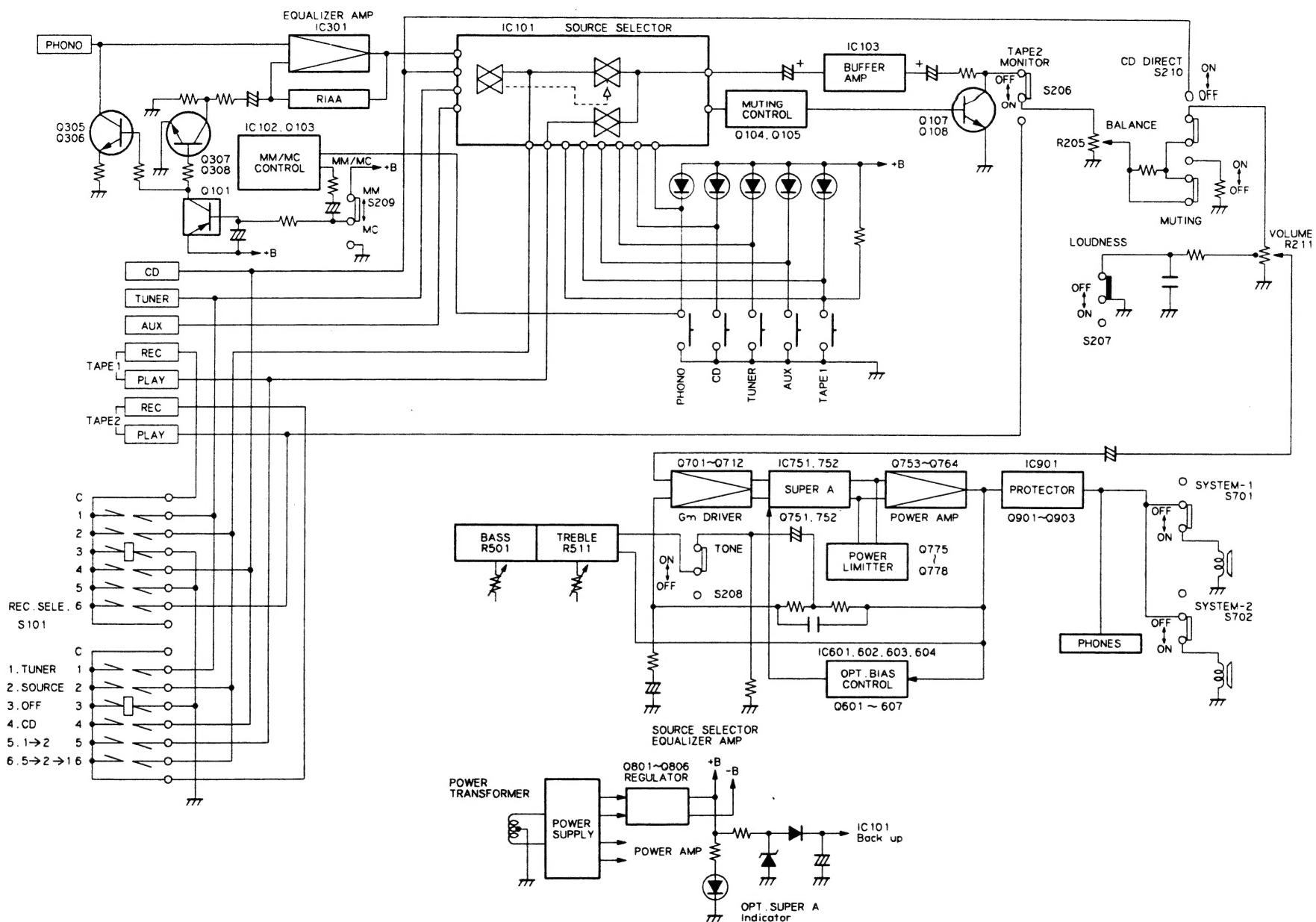
1. Before turning on the power, turn the semi-fixed resistors (R751 for L channel and R752 for R channel) of the power amplifier circuit board fully counterclockwise.
2. Adjust the semi-fixed resistor (R751 and R752) so that the voltage at the following test points of the power amplifier circuit board is within a range of 1 ~ 3 mV after the power is turned on.
L channel: Measure the voltage between test point ① (emitter of Q901) and output at the test point ②.
R channel: Measure the voltage between test point ① (emitter of Q902) and output at the test point ③.

3. Readjust resistors R751 and R752 about 10 minutes after the power is turned on (the heatsink temperature must be sufficiently high) so that the voltage at the test points becomes 11 mV. Confirm that the voltage does not vary when the heatsink temperature increases further.

Note: Be sure to perform the measurement with the probes and cabinet of the measuring equipment separated from the grounding terminals of AX-611BK or other measuring equipment.

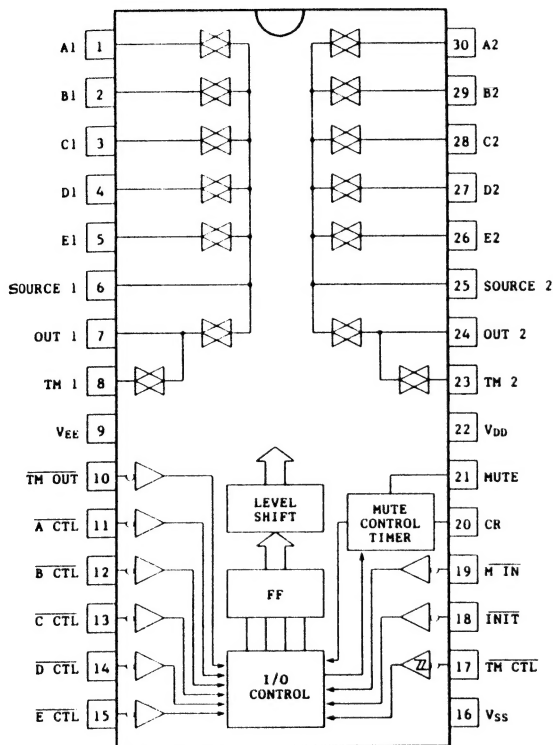
Since this set is a parallel balanced (push-pull) amplifier, check idling current of all the transistors after the above adjustment is performed.

Block Diagram

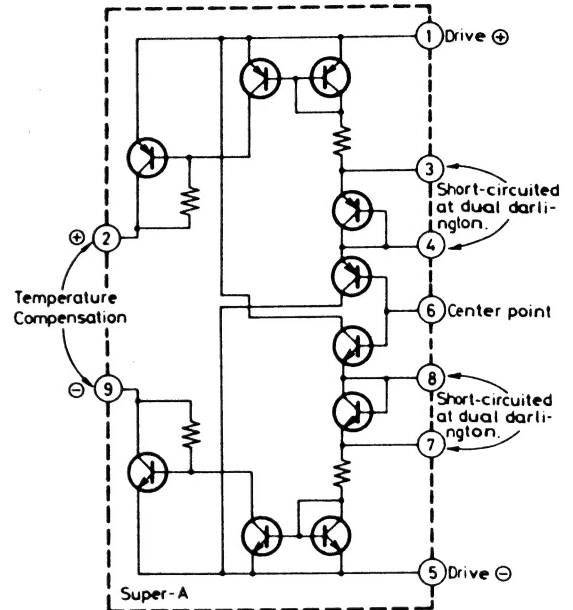


Internal Block Diagrams of ICs

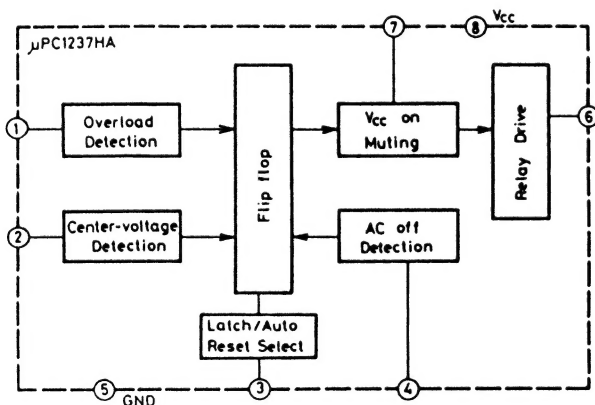
■ LC7818 (IC101): Analog Switch



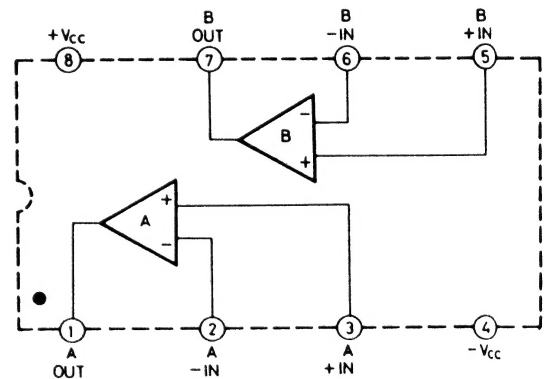
■ VC5022 [X, Y] (IC751, IC752): Super-A



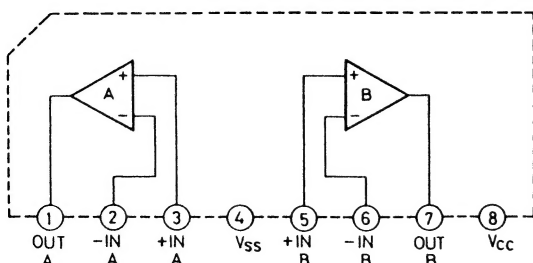
■ μ PC1237HA (IC901): Relay Driver



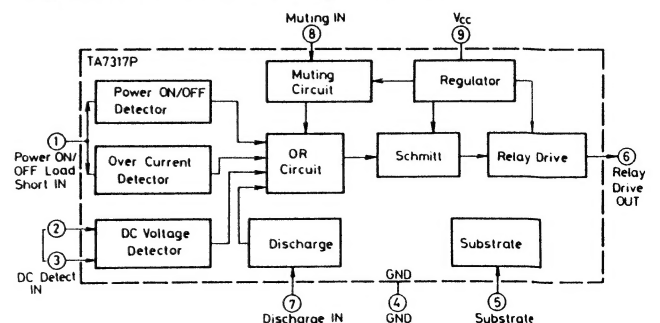
■ NJM4560DD (IC301): Dual OP Amp.



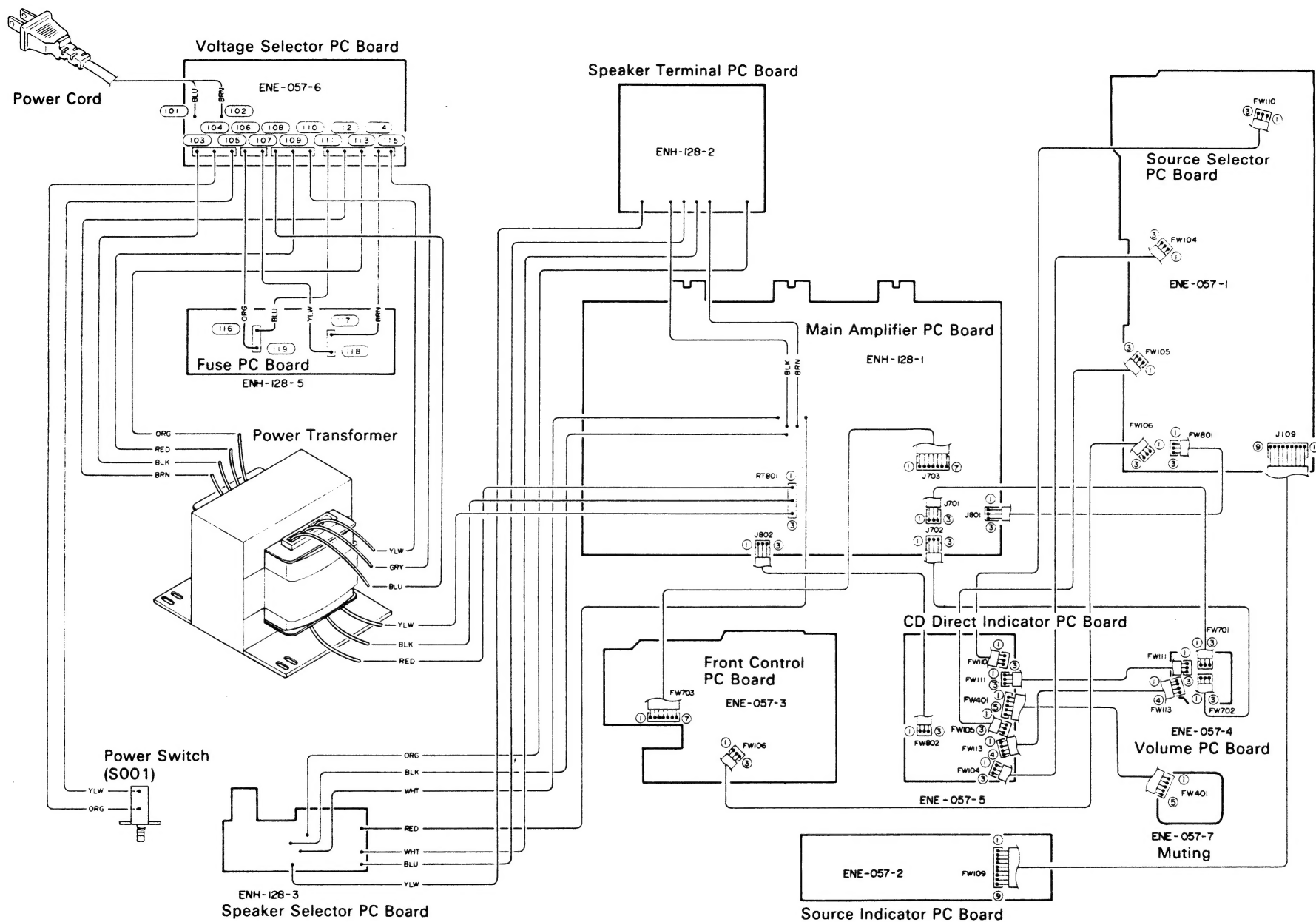
■ M5218L-R (IC103) : Dual OP Amp. ■ BA15218N (IC601, 602): Dual OP Amp.



■ TA7317P (IC102): Driver

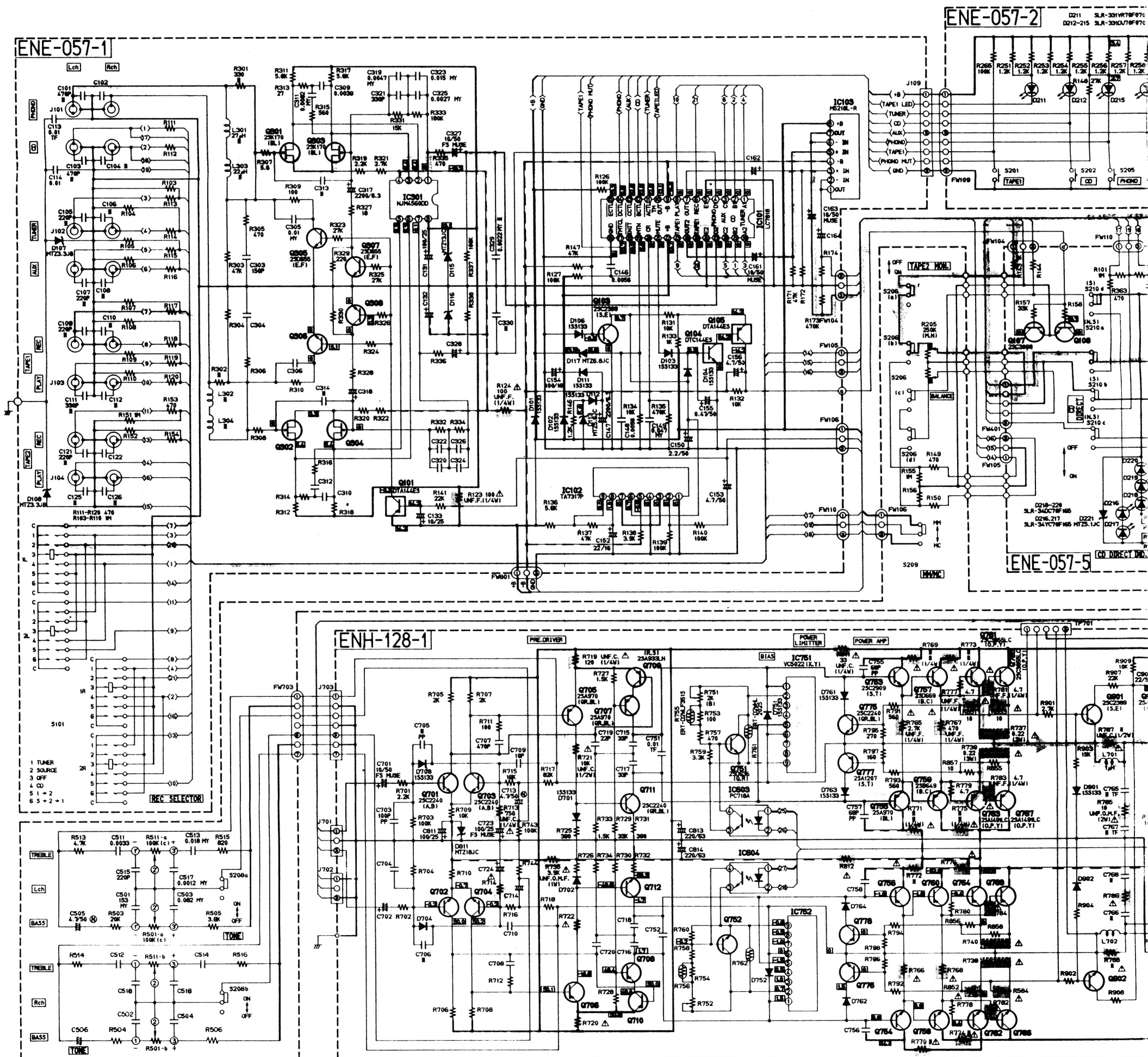


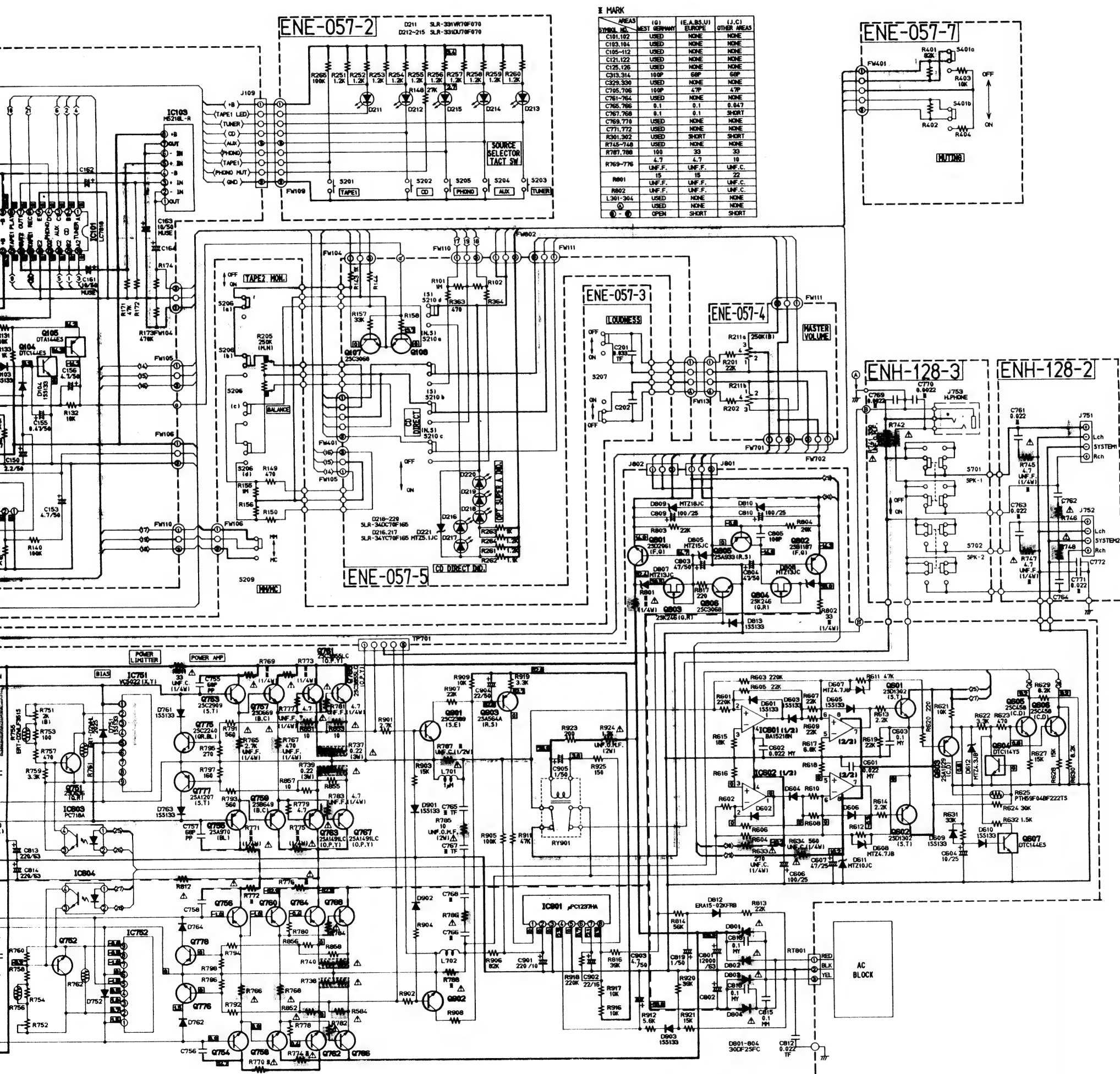
Connection Diagram



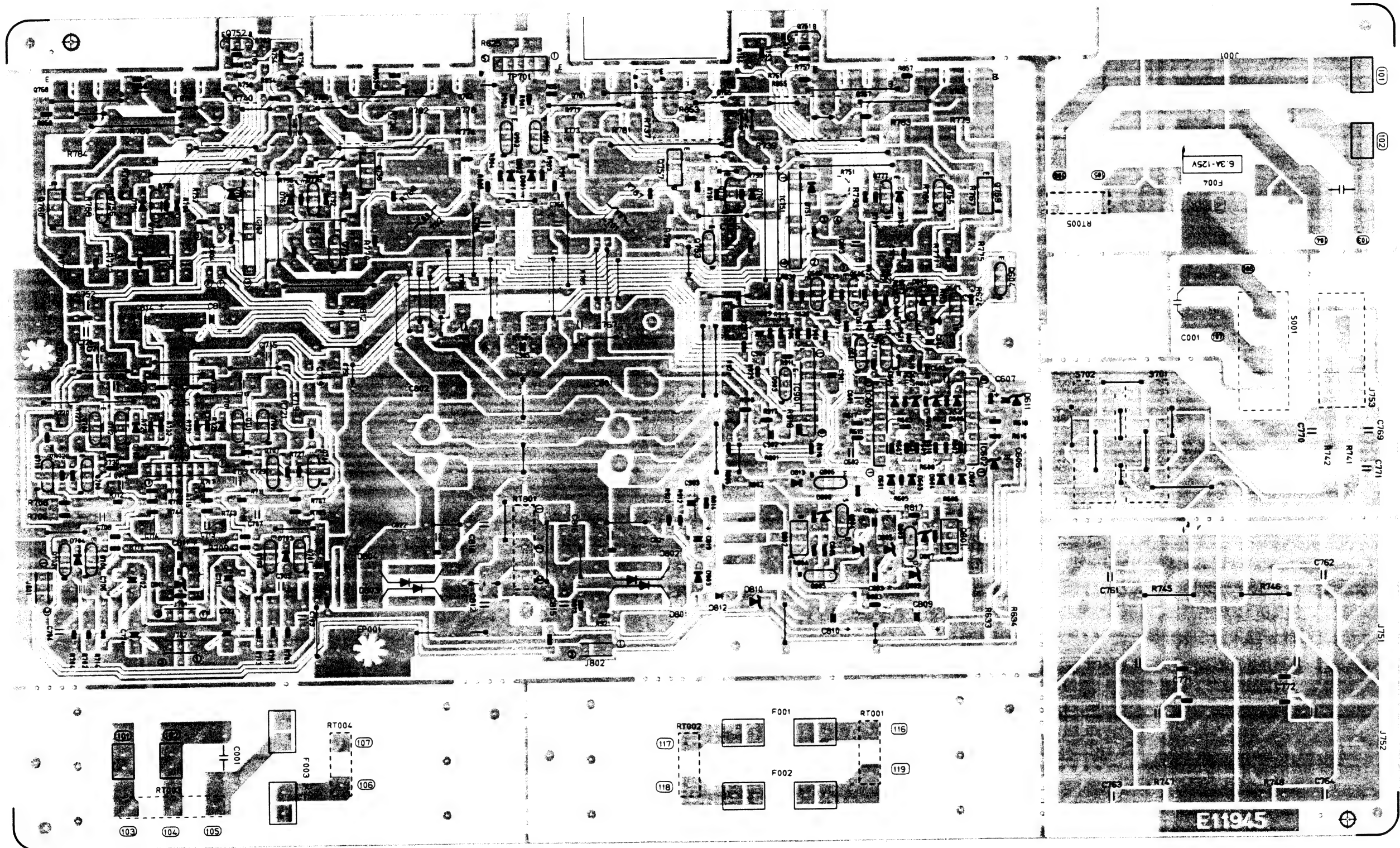
Schematic Diagrams

■ Source Select and Main Amplifier Section





■ Main Amplifier PC Board (ENH-128)

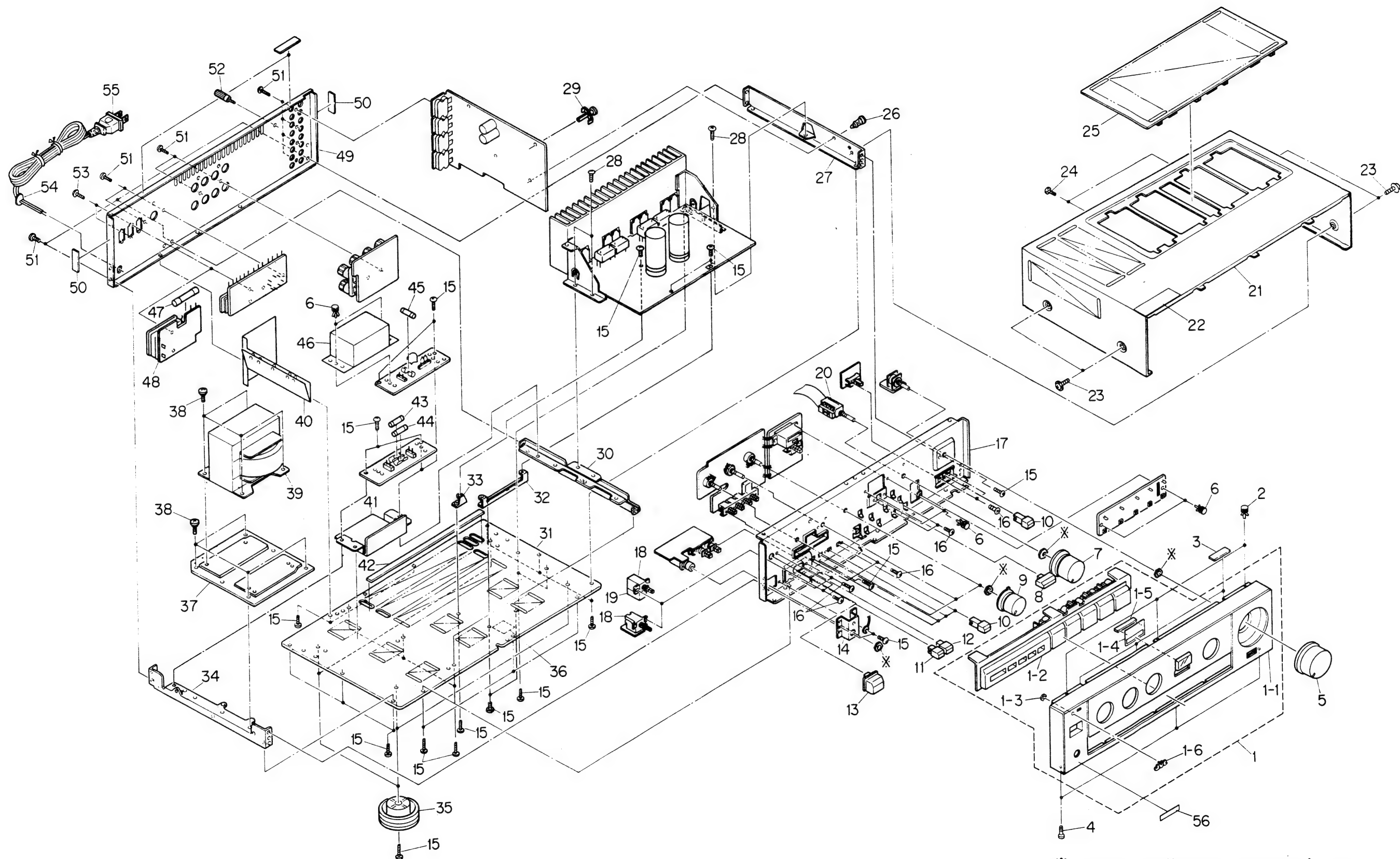


PARTS LIST

Contents

Exploded View and Parts List.....	2-3
Printed Circuit Board Ass'y and Parts List	2-7
■ ENH-128 □ Main Amplifier PC Board Ass'y	2-7
■ ENE-057 □ Source Selector PC Board Ass'y	2-11
Accessories List.....	2-14
Packing Materials and Part Numbers.....	2-15

Exploded View and Parts List



※ mark indicates attached part.

⚠	Item	Part Number	Part Name	Q'ty	Description	Areas
	1	EFP-AX611BKE	Front Panel Ass'y	1		
	1-1	E26392-002	Front Panel	1		
	1-2	E26332-003	Push Button Ass'y	1		
	1-3	E60912-003	Speed Nut	1		
	1-4	E75327-001	Indicator Sheet	1		
	1-5	EXO032003N10S02	Spacer	1		
	1-6	E72968-001	JVC Mark	1		
	2	E48729-009	Plastic Rivet	3		
	3	EXO060007N40S	Felt Spacer	3		
	4	SBSG3006M	Screw	3		
	5	E305980-001	Volume Knob	1		
	6	E48729-008	Plastic Rivet	4		J, C
		E48729-008	Plastic Rivet	6		Except J, C
	7	E305982-002	Knob	1		
	8	E75117-001	Push Button	1		
	9	E305981-002	Knob	3	Tone	
	10	E75182-001	Push Button	5	Tape	
	11	E75073-001	Push Button	1	SPK-1	
	12	E75073-002	Push Button	1	SPK-2	
	13	E75079-001	Power Button	1		
	14	E75186-001	Head Phone Bracket	1		
	15	SBSG3008CC	Screw	31		J, C
		SBSG3008CC	Screw	35		Except J, C
	16	SBST3006CC	Screw	10		
	17	E11954-001	Front Bracket	1		
	18	QSP1106-005	Push Switch	1	S001	Except J, C, BS
		QSP1106-005BS	Push Switch	1	S001	BS
	19	E71005-001	Switch Cover	1		Except J, C
	20	QSR2B16-E02	Flex Rotary	1		
	21	E26269-002	Metal Cover	1		U, E, EF, BS
	22	E26269-003	Metal Cover	1		
	23	E67000-005	Caution Label	1		J, C, A, G
	24	E61660-004	Spacial Screw	4		
	25	SBSG3008M	Screw	2		
		E24134-008	Grill	1		U, E, EF, BS
	26	E303216-001	Fastener	1		
	27	E305801-001	Side Bracket	1	Right	
	28	GBSB3008CC	Screw	3		
	29	E69384-002	Fastener	1		
	30	E305802-001	Center Bracket	1		
	31	E26268-002	Bottom Cover	1		
	32	E75341-001	Circuit Board Bracket	1		
	33	E68587-008	Bracket	1		
	34	E305800-001	Side Bracket	1	Left	
	35	E75088-001	Foot Ass'y	4		
	36	E72081-001	Caution Label	1		J
		E70115-002	Caution Label	1		U, E, EF, A, G, BS
	37	E306183-001	Trans Bracket	1		
	38	E65389-004	Special Screw	8		
⚠	39	ETP1200-36JA	Power Transformer	1	T001	J, C
⚠		ETP1200-36FA	Power Transformer	1	T001	U
⚠		ETP1200-36EA	Power Transformer	1	T001	E, EF, A, G
⚠	40	ETP1200-36EABS	Power Transformer	1	T001	BS
		E305986-001	Protect Cover	1		U
		E305986-002	Protect Cover	1		E, EF, A, G, BS
	41	E75439-001	Protect Cover	1		Except J, C
⚠	42	EXO255005N60S02	Spacer	1		
⚠	43	QMF51E2-4R0J1	Fuse	1	F001	U
⚠	44	QMF51A2-8R0J1	Fuse	1	F002	U
⚠	45	QMF51E2-4R0J1	Fuse	1	F003	E, EF, A, G
⚠	46	QMF51E2-4R0J1BS	Fuse	1	F003	BS
⚠	47	E306171-001	Protect Cover	1		Except J, C
	48	QMF61U1-8R0	Fuse	1	F004	J, C
		E69589-010	Spacer	1		J
	49	E26340-004	Rear Panel	1		J, C

⚠: Safety Parts







⚠	Item	Part Number	Part Name	Q'ty	Description	Areas
		E26340-005	Rear Panel	1		U
		E26340-006	Rear Panel	1		E, EF, A, G, BS
	—	E303260-198	Rating Label	1		E, EF, G
	50	EXO040010R10S10	Spacer	2		
	51	E73273-001	Screw	9		Except U
		E73273-001	Screw	11		U
	52	E70078-001	GND. Terminal	1		
⚠	53	SDSB3008M	Screw	2		J, C, U
⚠	54	QHS3876-162	Cord Stopper	1		Except BS
⚠		QHS3876-162BS	Cord Stopper	1		BS
⚠	55	QMP1480-200	Power Cord	1		J, C
⚠		QMP7520-200	Power Cord	1		U
⚠		QMP3900-200	Power Cord	1		E, EF, G
⚠		QMP2560-244	Power Cord	1		A
⚠		QMP9017-008BS	Power Cord	1		BS
	56	E49267-001	Origin Marking Label	1		BS
	—	E74247-004	Caution Label	1		J
	—	E67199-001	Caution Label	1		J
	—	E65507-001	Caution Label	1		C

⚠: Safety Parts

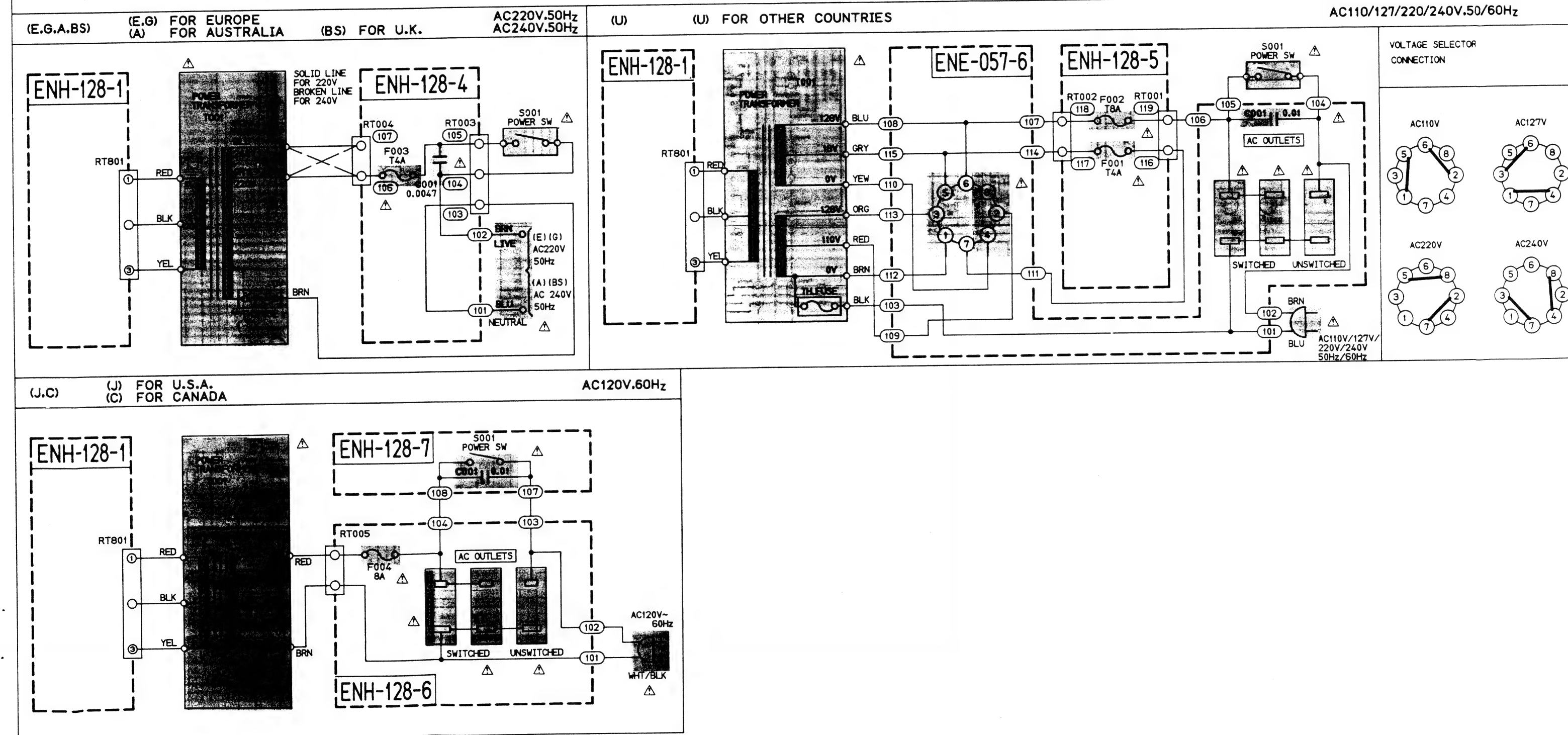
The Marks for Designated Areas		
J.....the U.S.A	E, EF.....	Continental Europe
C.....Canada	BS.....	the U.K.
A.....Australia	U.....	Other Countries
G.....West Germany	No mark indicates all areas.	

Power Supply Section

Notes:

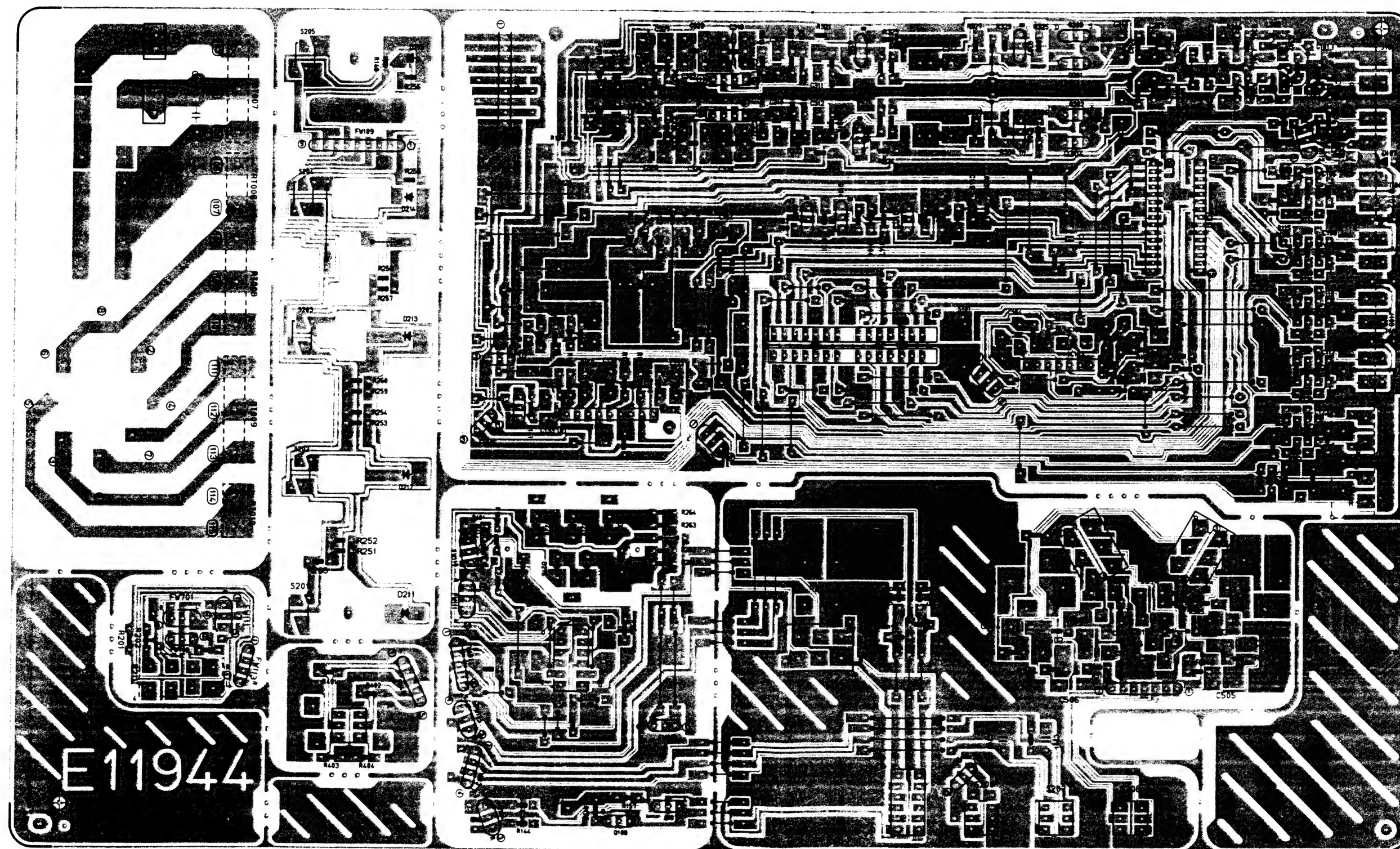
- Notes:**
1.  indicates + B power supply.
 2.  indicates - B power supply.
 3.  indicates signal path.
 4.  shows DC voltage to the chassis with no signal input.
 5. When replacing the parts in the darkened are () and those marked with  , be sure to use the designated parts to ensure safety.
 6. This is the standard circuit diagram.
The design and contents are subject to change without notice.

POWER SUPPLY BLOCK



Printed Circuit Boards

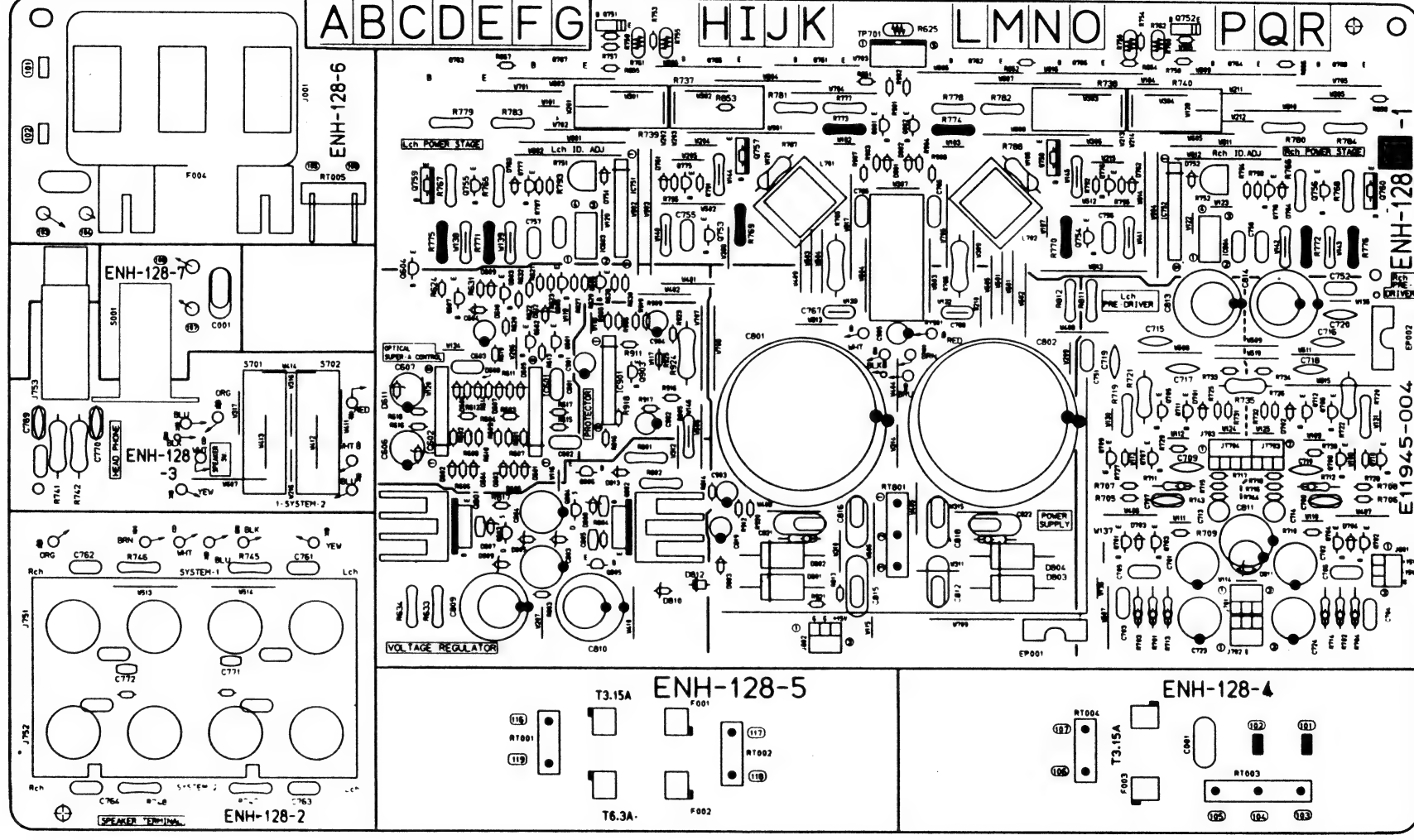
■ Source Select PC Board (ENE-057)



Printed Circuit Board Ass'y and Parts List

■ ENH-128 □ Main Amplifier PC Board Ass'y

Note: ENH-128 □ varies according to the employed. See note (1) when placing an order.



Note (1)

PC Board Ass'y	Designated Areas
ENH-128 F	Other Countries
ENH-128 G	Australia, Continental Europe
ENH-128 H	West Germany
ENH-128 I BS	the U.K.
ENH-128 J	the U.S.A., Canada

Transistors

△	ITEM	PART NUMBER	DESCRIPTION		AREA
				MAKER	
	Q601	2SD1302(S,T)	SILICON	MATSUSHITA	
	Q602	2SD1302(S,T)	SILICON	MATSUSHITA	
	Q603	2SA1029(C,D)	SILICON	HITACHI	
	Q604	DTC114YS	SILICON	ROHM	
	Q605	2SC458(C,D)	SILICON	HITACHI	
	Q606	2SC458(C,D)	SILICON	HITACHI	
	Q607	DTC144ES	SILICON	ROHM	
	Q701	2SC2240(A,B)	SILICON	TOSHIBA	
	Q702	2SC2240(A,B)	SILICON	TOSHIBA	
	Q703	2SC2240(A,B)	SILICON	TOSHIBA	
	Q704	2SC2240(A,B)	SILICON	TOSHIBA	
	Q705	2SA970(GR,BL)	SILICON	TOSHIBA	
	Q706	2SA970(GR,BL)	SILICON	TOSHIBA	
	Q707	2SA970(GR,BL)	SILICON	TOSHIBA	
	Q708	2SA970(GR,BL)	SILICON	TOSHIBA	
	Q709	2SA933LN(R,S)	SILICON	ROHM	
	Q710	2SA933LN(R,S)	SILICON	ROHM	
	Q711	2SC2240(GR,BL)	SILICON	TOSHIBA	
	Q712	2SC2240(GR,BL)	SILICON	TOSHIBA	
	Q751	2SD636(Q,R)	SILICON	MATSUSHITA	
	Q752	2SD636(Q,R)	SILICON	MATSUSHITA	
	Q753	2SC2909(S,T)	SILICON	SANYO	
	Q754	2SC2909(S,T)	SILICON	SANYO	
	Q755	2SA1207(S,T)	SILICON	SANYO	
	Q756	2SA1207(S,T)	SILICON	SANYO	
	Q757	2SD669A(B,C)	SILICON	HITACHI	
	Q758	2SD669A(B,C)	SILICON	HITACHI	
	Q759	2SB649A(B,C)	SILICON	HITACHI	
	Q760	2SB649A(B,C)	SILICON	HITACHI	
	Q761	2SC3855LC(O,Y)	SILICON		
	Q762	2SC3855LC(O,Y)	SILICON		
	Q763	2SA1491LC(O,Y)	SILICON		
	Q764	2SA1491LC(O,Y)	SILICON		
	Q765	2SC3855LC(O,Y)	SILICON		
	Q766	2SC3855LC(O,Y)	SILICON		
	Q767	2SA1491LC(O,Y)	SILICON		
	Q768	2SA1491LC(O,Y)	SILICON		
	Q775	2SC2240(GR,BL)	SILICON	TOSHIBA	
	Q776	2SC2240(GR,BL)	SILICON	TOSHIBA	
	Q777	2SA970(GR,BL)	SILICON	TOSHIBA	
	Q778	2SA970(GR,BL)	SILICON	TOSHIBA	
	Q801	2SD2061(F,G)	SILICON	ROHM	
	Q802	2SB1187(F,G)	SILICON	ROHM	
	Q803	2SK246(GR)	F.E.T	TOSHIBA	
	Q804	2SK246(GR)	F.E.T	TOSHIBA	
	Q805	2SA933S(R,S)	SILICON	ROHM	
	Q806	2SC3068	SILICON	SANYO	
	Q901	2SC2389(S,E)	SILICON	ROHM	
	Q902	2SC2389(S,E)	SILICON	ROHM	
	Q903	2SA564A(R,S)	SILICON	MATSUSHITA	

△ : SAFETY PARTS

I.C.s

A	ITEM	PART NUMBER	DESCRIPTION		AREA
				MAKER	
	IC601	BA15218N	I.C.	ROHM	
	IC602	BA15218N	I.C.	ROHM	
	IC603	PC817A	I.C.	SHARP	
	IC604	PC817A	I.C.	SHARP	
	IC751	VC5022(X,Y)	I.C.	ROHM	
	IC752	VC5022(X,Y)	I.C.	ROHM	
	IC901	UPC1237HA	I.C.	NEC	

△ : SAFETY PARTS

Diodes

ITEM	PART NUMBER	DESCRIPTION		AREA
			MAKER	
	D601	1SS133	SILICON	ROHM
	D602	1SS133	SILICON	ROHM
	D603	1SS133	SILICON	ROHM
	D604	1SS133	SILICON	ROHM
	D605	1SS133	SILICON	ROHM
	D606	1SS133	SILICON	ROHM
	D607	MT24.7JB	ZENER	ROHM
	D608	MT24.7JB	ZENER	ROHM
	D609	1SS133	SILICON	ROHM
	D610	1SS133	SILICON	ROHM
	D611	MT210JC	ZENER	ROHM
	D612	MT24.3JB	ZENER	ROHM
	D701	1SS133	SILICON	ROHM
	D702	1SS133	SILICON	ROHM
	D703	1SS133	SILICON	ROHM
	D704	1SS133	SILICON	ROHM
	D751	1SS133	SILICON	ROHM
	D752	1SS133	SILICON	ROHM
	D761	1SS133	SILICON	ROHM
	D762	1SS133	SILICON	ROHM
	D763	1SS133	SILICON	ROHM
	D764	1SS133	SILICON	ROHM
	D801	30DF2SFC	SILICON	NIHONINTER
	D802	30DF2SFC	SILICON	NIHONINTER
	D803	30DF2SFC	SILICON	NIHONINTER
	D804	30DF2SFC	SILICON	NIHONINTER
	D805	MT215JC	ZENER	ROHM
	D807	MT213JC	ZENER	ROHM
	D808	MT213JC	ZENER	ROHM
	D809	MT218JC	ZENER	ROHM
	D810	MT218JC	ZENER	ROHM
	D811	MT218JC	ZENER	ROHM
△	D812	ERA15-02L19	SILICON	KYODOU
	D813	1SS133	SILICON	ROHM
	D901	1SS133	SILICON	ROHM
	D902	1SS133	SILICON	ROHM
	D903	1SS133	SILICON	ROHM

△ : SAFETY PARTS

Capacitors

ITEM	PART NUMBER	DESCRIPTION		AREA
C001	QCZ9038-103	0.01MF	CERAMIC	G
C001	QCZ9038-103	0.01MF	CERAMIC	H
C001	QCZ9038-103	0.01MF	CERAMIC	J
C001	QCZ9038-103BS	0.01MF	CERAMIC	IBS
C601	QFN81HJ-223	0.022MF	50V MYLAR	
C602	QFN81HJ-223	0.022MF	50V MYLAR	
C603	QFN81HK-104	0.1MF	50V MYLAR	
C604	QETB1EM-106	10MF	25V ELECTRO	
C606	QETB1EM-107	100MF	25V ELECTRO	
C607	QETB1EM-476	47MF	25V ELECTRO	
C701	EEZ5009-106	10MF	ELECTRO	
C702	EEZ5009-106	10MF	ELECTRO	
C703	QFP81HJ-101	100PF	50V POLY	
C704	QFP81HJ-101	100PF	50V POLY	
C705	QFP81HJ-101	100PF	50V POLY	H
C705	QFP81HJ-470	47PF	50V POLY	F
C705	QFP81HJ-470	47PF	50V POLY	G
C705	QFP81HJ-470	47PF	50V POLY	IBS
C705	QFP81HJ-470	47PF	50V POLY	J
C706	QFP81HJ-101	100PF	50V POLY	H
C706	QFP81HJ-470	47PF	50V POLY	F
C706	QFP81HJ-470	47PF	50V POLY	G
C706	QFP81HJ-470	47PF	50V POLY	IBS
C706	QFP81HJ-470	47PF	50V POLY	J
C707	QCS21HJ-471	470PF	50V CERAMIC	
C708	QCS21HJ-471	470PF	50V CERAMIC	
C709	QCS21HJ-100	10PF	50V CERAMIC	
C710	QCS21HJ-100	10PF	50V CERAMIC	
C713	QEN51HM-475	4.7MF	50V NON POLE	
C714	QEN51HM-475	4.7MF	50V NON POLE	
C715	QCS21HJ-330	33PF	50V CERAMIC	
C716	QCS21HJ-330	33PF	50V CERAMIC	
C717	QCS21HJ-330	33PF	50V CERAMIC	
C718	QCS21HJ-330	33PF	50V CERAMIC	
C719	QCS21HJ-220	22PF	50V CERAMIC	
C720	QCS21HJ-220	22PF	50V CERAMIC	
C723	EEZ2505-107	100MF	ELECTRO	
C724	EEZ2505-107	100MF	ELECTRO	
C751	QFP81HJ-103	0.01MF	50V POLY	
C752	QFP81HJ-103	0.01MF	50V POLY	

Capacitors

ITEM	PART NUMBER	DESCRIPTION	AREA
C755	QFP82AJ-680	68PF 100V POLY	
C756	QFP82AJ-680	68PF 100V POLY	
C757	QFP82AJ-680	68PF 100V POLY	
C758	QFP82AJ-680	68PF 100V POLY	
C761	QFN81HK-223	0.022MF 50V MYLAR	H
C762	QFN81HK-223	0.022MF 50V MYLAR	H
C763	QFN81HK-223	0.022MF 50V MYLA	H
C764	QFN81HK-223	0.022MF 50V MYLA	H
C765	QFV81HJ-104	0.1MF 50V T.FILM	
C766	QFV81HJ-104	0.1MF 50V T.FILM	
C767	QFV81HJ-104	0.1MF 50V T.FILM	
C768	QFV81HJ-104	0.1MF 50V T.FILM	
C769	QCF21HP-222	2200PF 50V CERAMIC	H
C770	QCF21HP-222	2200PF 50V CERAMIC	H
C771	QCHB1EZ-223	0.022MF 25V CERAMIC	H
C772	QCHB1EZ-223	0.022MF 25V CERAMIC	H
C801	EEW6309-129T	12000MF ELECTRO	
C802	EEW6309-129T	12000MF ELECTRO	
C803	QETB1HM-476	47MF 50V ELECTRO	
C804	QETB1HM-476	47MF 50V ELECTRO	
C805	QCB81HK-101	100PF 50V CERAMIC	
C809	QETB1EM-107	100MF 25V ELECTRO	
C810	QETB1EM-107	100MF 25V ELECTRO	
C811	QETB1EM-107	100MF 25V ELECTRO	
C812	QFV81HJ-223	0.022MF 50V T.FILM	
C813	QETB1JM-227	220MF 63V ELECTRO	
C814	QETB1JM-227	220MF 63V ELECTRO	
C815	QFH42EK-104	0.1MF 250V M.MYLAR	
C816	QFN82AK-104	0.1MF 100V MYLAR	
C818	QFN82AK-104	0.1MF 100V MYLAR	
C819	QETB1HM-105	1MF 50V ELECTRO	
C901	QETB1AM-227	220MF 10V ELECTRO	
C902	QETB1CM-226	22MF 16V ELECTRO	
C903	QETB1HM-475	4.7MF 50V ELECTRO	
C904	QETB1HM-226	22MF 50V ELECTRO	
C905	QETB1HM-105	1MF 50V ELECTRO	

△ : SAFETY PARTS

Resistors

ITEM	PART NUMBER	DESCRIPTION	AREA
R601	QRD167J-224	220K 1/6W CARBON	
R602	QRD167J-224	220K 1/6W CARBON	
R603	QRD167J-224	220K 1/6W CARBON	
R604	QRD167J-224	220K 1/6W CARBON	
R605	QRD167J-223	22K 1/6W CARBON	
R606	QRD167J-223	22K 1/6W CARBON	
R607	QRD167J-223	22K 1/6W CARBON	
R608	QRD167J-223	22K 1/6W CARBON	
R609	QRD167J-223	22K 1/6W CARBON	
R610	QRD167J-223	22K 1/6W CARBON	
R611	QRD167J-473	47K 1/6W CARBON	
R612	QRD167J-473	47K 1/6W CARBON	
R613	QRD167J-222	2.2K 1/6W CARBON	
R614	QRD167J-222	2.2K 1/6W CARBON	
R615	QRD167J-183	18K 1/6W CARBON	
R616	QRD167J-183	18K 1/6W CARBON	
R617	QRD167J-682	6.8K 1/6W CARBON	
R618	QRD167J-682	6.8K 1/6W CARBON	
R619	QRD167J-223	22K 1/6W CARBON	
R620	QRD167J-221	220 1/6W CARBON	
R621	QRD167J-103	10K 1/6W CARBON	
R622	QRD167J-332	3.3K 1/6W CARBON	
R623	QRD167J-471	470 1/6W CARBON	
R624	QRD167J-303	30K 1/6W CARBON	
R625	PTH59F048F222TS	POSISTOR	
R627	QRD167J-153	15K 1/6W CARBON	
R628	QRD167J-153	15K 1/6W CARBON	
R629	QRD167J-822	8.2K 1/6W CARBON	
R630	QRD167J-822	8.2K 1/6W CARBON	
R631	QRD167J-333	33K 1/6W CARBON	
R632	QRD167J-152	1.5K 1/6W CARBON	
R633	QRD14CJ-271S	270 1/4W UNF. CARBON	
R634	QRD14CJ-271S	270 1/4W UNF. CARBON	
R701	QRD167J-222	2.2K 1/6W CARBON	
R702	QRD167J-222	2.2K 1/6W CARBON	
R703	QRD167J-104	100K 1/6W CARBON	
R704	QRD167J-104	100K 1/6W CARBON	
R705	QRD167J-202	2K 1/6W CARBON	
R706	QRD167J-202	2K 1/6W CARBON	
R707	QRD167J-202	2K 1/6W CARBON	

Resistors

ITEM	PART NUMBER	DESCRIPTION	AREA
R708	QRD167J-202	2K 1/6W CARBON	
R709	QRD167J-103	10K 1/6W CARBON	
R710	QRD167J-103	10K 1/6W CARBON	
R711	QRD167J-101	100 1/6W CARBON	
R712	QRD167J-101	100 1/6W CARBON	
R713	QRD14CJ-751S	750 1/4W UNF. CARBON	
R714	QRD14CJ-751S	750 1/4W UNF. CARBON	
R715	QRD167J-163	16K 1/6W CARBON	
R716	QRD167J-163	16K 1/6W CARBON	
R717	QRD167J-823	82K 1/6W CARBON	
R718	QRD167J-823	82K 1/6W CARBON	
R719	QRD14CJ-121S	120 1/4W UNF. CARBON	
R720	QRD14CJ-121S	120 1/4W UNF. CARBON	
R721	QRD125J-103	10K 1/2W UNF. CARBON	
R722	QRD125J-103	10K 1/2W UNF. CARBON	
R725	QRD167J-391	390 1/6W CARBON	
R726	QRD167J-391	390 1/6W CARBON	
R727	QRD167J-152	1.5K 1/6W CARBON	
R728	QRD167J-152	1.5K 1/6W CARBON	
R729	QRD167J-333	33K 1/6W CARBON	
R730	QRD167J-333	33K 1/6W CARBON	
R731	QRD167J-391	390 1/6W CARBON	
R732	QRD167J-391	390 1/6W CARBON	
R733	QRD167J-152	1.5K 1/6W CARBON	
R734	QRD167J-152	1.5K 1/6W CARBON	
R735	QRG012J-392A	3.9K 1W O.M. FILM	
R737	ERF032K-R22	0.22 3W CEMENT	
R738	ERF032K-R22	0.22 3W CEMENT	
R739	ERF032K-R22	0.22 3W CEMENT	
R740	ERF032K-R22	0.22 3W CEMENT	
R741	QRG022J-331A	330 2W O.M. FILM	
R742	QRG022J-331A	330 2W O.M. FILM	
R743	QRD167J-104	100K 1/6W CARBON	
R744	QRD167J-104	100K 1/6W CARBON	
R745	QRD14CJ-4R7S	4.7 1/4W UNF. CARBON	H
R746	QRD14CJ-4R7S	4.7 1/4W UNF. CARBON	H
R747	QRD14CJ-4R7S	4.7 1/4W UNF. CARBON	H
R748	QRD14CJ-4R7S	4.7 1/4W UNF. CARBON	H
R751	QVPE601-202	2K 0.15W VARIABLE	
R752	QVPE601-202	2K 0.15W VARIABLE	
R753	QRD167J-101	100 1/6W CARBON	
R754	QRD167J-101	100 1/6W CARBON	
R755	ERT-D2WFL351S	350 1/4W THERMISTOR	
R756	ERT-D2WFL351S	350 1/4W THERMISTOR	
R757	QRD167J-471	470 1/6W CARBON	
R758	QRD167J-471	470 1/6W CARBON	
R759	QRD167J-332	3.3K 1/6W CARBON	
R760	QRD167J-332	3.3K 1/6W CARBON	
R761	ERT-D2WHL202S	2K 1/4W THERMISTOR	
R762	ERT-D2WHL202S	2K 1/4W THERMISTOR	
R765	QRZ0077-272	2.7K 1/4W FUSIBLE	
R766	QRZ0077-272	2.7K 1/4W FUSIBLE	
R767	QRZ0077-471	470 1/4W FUSIBLE	
R768	QRZ0077-471	470 1/4W FUSIBLE	
R769	QRZ0077-4R7	4.7 1/4W FUSIBLE	
R770	QRZ0077-4R7	4.7 1/4W FUSIBLE	
R771	QRZ0077-4R7	4.7 1/4W FUSIBLE	
R772	QRZ0077-4R7	4.7 1/4W FUSIBLE	
R773	QRZ0077-4R7	4.7 1/4W FUSIBLE	
R774	QRZ0077-4R7	4.7 1/4W FUSIBLE	
R775	QRZ0077-4R7	4.7 1/4W FUSIBLE	
R776	QRZ0077-4R7	4.7 1/4W FUSIBLE	
R777	QRZ0077-4R7	4.7 1/4W FUSIBLE	
R778	QRZ0077-4R7	4.7 1/4W FUSIBLE	
R779	QRZ0077-4R7	4.7 1/4W FUSIBLE	
R780	QRZ0077-4R7	4.7 1/4W FUSIBLE	
R781	QRZ0077-4R7	4.7 1/4W FUSIBLE	
R782	QRZ0077-4R7	4.7 1/4W FUSIBLE	
R783	QRZ0077-4R7	4.7 1/4W FUSIBLE	
R784	QRZ0077-4R7	4.7 1/4W FUSIBLE	
R785	QRG022J-100A	10 2W O.M. FILM	
R786	QRG022J-100A	10 2W O.M. FILM	
R787	QRD125J-101	100 1/2W UNF. CARBON	H
R787	QRD125J-330	33 1/2W UNF. CARBON	F
R787	QRD125J-330	33 1/2W UNF. CARBON	G
R787	QRD125J-330	33 1/2W UNF. CARBON	IBS
R787	QRD125J-330	33 1/2W UNF. CARBON	J
R788	QRD125J-101	100 1/2W UNF. CARBON	H
R788	QRD125J-330	33 1/2W UNF. CARBON	F
R788	QRD125J-330	33 1/2W UNF. CARBON	G
R788	QRD125J-330	33 1/2W UNF. CARBON	IBS
R788	QRD125J-330	33 1/2W UNF. CARBON	J
R791	QRD167J-561	560 1/6W CARBON	
R792	QRD167J-561	560 1/6W CARBON	
R793	QRD167J-561	560 1/6W CARBON	
R794	QRD167J-561	560 1/6W CARBON	
R795	QRD167J-271	270 1/6W CARBON	

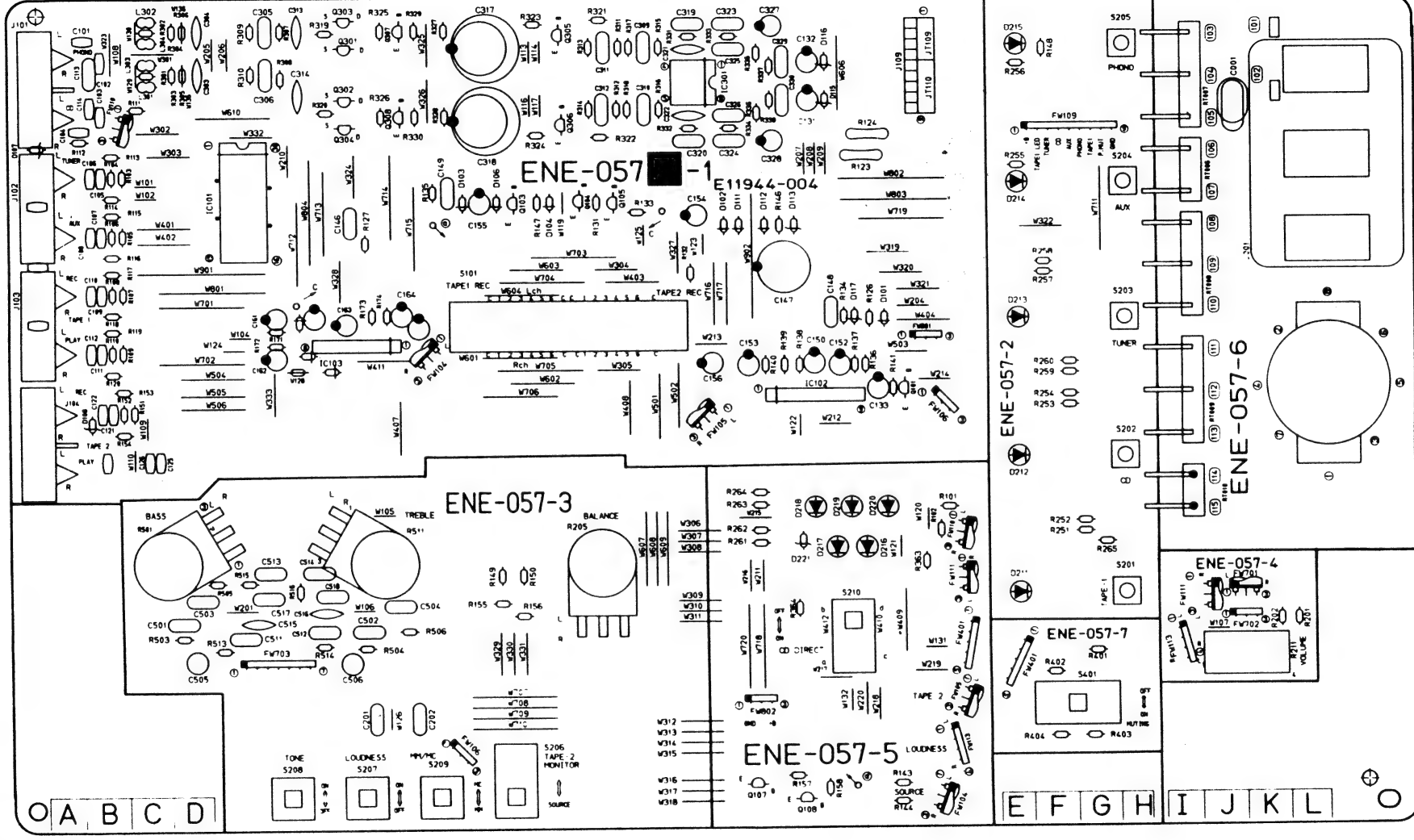
△	ITEM	PART NUMBER	DESCRIPTION		AREA
	R796	QRD167J-271	270	1/6W	CARBON
	R797	QRD167J-161	160	1/6W	CARBON
	R798	QRD167J-161	160	1/6W	CARBON
△	R801	QRD14CJ-220S	22	1/4W	UNF. CARBON
△	R801	QR20077-150	15	1/4W	FUSIBLE
△	R801	QR20077-150	15	1/4W	FUSIBLE
△	R801	QR20077-150	15	1/4W	FUSIBLE
△	R801	QR20077-150	15	1/4W	FUSIBLE
△	R802	QRD14CJ-330S	33	1/4W	UNF. CARBON
△	R802	QR20077-330	33	1/4W	FUSIBLE
△	R802	QR20077-330	33	1/4W	FUSIBLE
△	R802	QR20077-330	33	1/4W	FUSIBLE
△	R802	QR20077-330	33	1/4W	FUSIBLE
	R803	QRD167J-223	22K	1/6W	CARBON
	R804	QRD167J-203	20K	1/6W	CARBON
△	R811	QRD14CJ-330S	33	1/4W	UNF. CARBON
△	R811	QR20077-330	33	1/4W	FUSIBLE
△	R811	QR20077-330	33	1/4W	FUSIBLE
△	R811	QR20077-330	33	1/4W	FUSIBLE
△	R811	QR20077-330	33	1/4W	FUSIBLE
△	R812	QRD14CJ-330S	33	1/4W	UNF. CARBON
△	R812	QR20077-330	33	1/4W	FUSIBLE
△	R812	QR20077-330	33	1/4W	FUSIBLE
△	R812	QR20077-330	33	1/4W	FUSIBLE
△	R812	QR20077-330	33	1/4W	FUSIBLE
	R813	QRD167J-223	22K	1/6W	CARBON
	R814	QRD167J-563	56K	1/6W	CARBON
	R816	QRD167J-393	39K	1/6W	CARBON
	R817	QRD167J-221	220	1/6W	CARBON
	R851	QRD167J-100	10	1/6W	CARBON
	R852	QRD167J-100	10	1/6W	CARBON
	R853	QRD167J-100	10	1/6W	CARBON
	R854	QRD167J-100	10	1/6W	CARBON
	R855	QRD167J-100	10	1/6W	CARBON
	R856	QRD167J-100	10	1/6W	CARBON
	R857	QRD167J-100	10	1/6W	CARBON
	R858	QRD167J-100	10	1/6W	CARBON
	R901	QRD167J-272	2.7K	1/6W	CARBON
	R902	QRD167J-272	2.7K	1/6W	CARBON
	R903	QRD167J-153	15K	1/6W	CARBON
	R904	QRD167J-153	15K	1/6W	CARBON
	R905	QRD167J-104	100K	1/6W	CARBON
	R906	QRD167J-823	82K	1/6W	CARBON
	R907	QRD167J-223	22K	1/6W	CARBON
	R908	QRD167J-223	22K	1/6W	CARBON
	R909	QRD167J-103	10K	1/6W	CARBON
	R911	QRD167J-473	47K	1/6W	CARBON
	R912	QRD167J-562	5.6K	1/6W	CARBON
	R916	QRD167J-103	10K	1/6W	CARBON
	R917	QRD167J-103	10K	1/6W	CARBON
	R918	QRD167J-224	220K	1/6W	CARBON
	R919	QRD167J-332	3.3K	1/6W	CARBON
	R920	QRD167J-393	39K	1/6W	CARBON
	R921	QRD167J-153	15K	1/6W	CARBON
	R923	QRD167J-201	200	1/6W	CARBON
△	R924	QRG022J-122A	1.2K	2W	D.M.FILM
	R925	QRD167J-151	150	1/6W	CARBON

Others

▲ : SAFETY PARTS

■ ENE-057 □ Source Selector PC Board Ass'y

Note: ENE-057 □ Varies according to the employed. See note (1) when placing an order.



Note (1)

PC Board Ass'y	Designated Areas
ENE-057 D	the U.S.A., Canada, Continental Europe Australia, the U.K.
ENE-057 E	West Germany
ENE-057 F	Other Countries

Transistors

ITEM	PART NUMBER	DESCRIPTION	AREA
		MAKER	
Q101	DTA144ES	SILICON ROHM	
Q103	2SC2389(S,E)	SILICON ROHM	
Q104	DTC144ES	SILICON ROHM	
Q105	DTA144ES	SILICON ROHM	
Q107	2SC3068	SILICON SANYO	
Q108	2SC3068	SILICON SANYO	
Q301	2SK170(BL)	F.E.T. TOSHIBA	
Q302	2SK170(BL)	F.E.T. TOSHIBA	
Q303	2SK170(BL)	F.E.T. TOSHIBA	
Q304	2SK170(BL)	F.E.T. TOSHIBA	
Q305	2SD655(E,F)	SILICON HITACHI	
Q306	2SD655(E,F)	SILICON HITACHI	
Q307	2SD655(E,F)	SILICON HITACHI	
Q308	2SD655(E,F)	SILICON HITACHI	

Δ : SAFETY PARTS

I.C.s

ITEM	PART NUMBER	DESCRIPTION	AREA
		MAKER	
IC101	LC7818	I.C. SANYO	
IC102	TA7317P	I.C. TOSHIBA	
IC103	VC4580LD	I.C. DAINICHI	
IC301	NJM4560DD	I.C. DAINICHI	

Δ : SAFETY PARTS

Diodes

ITEM	PART NUMBER	DESCRIPTION	AREA
		MAKER	
D101	1SS133	SILICON ROHM	
D102	1SS133	SILICON ROHM	
D103	1SS133	SILICON ROHM	
D104	1SS133	SILICON ROHM	
D106	1SS133	SILICON ROHM	
D107	MT23.3JB	ZENER ROHM	
D108	MT23.3JB	ZENER ROHM	
D111	1SS133	SILICON ROHM	
D112	1SS133	SILICON ROHM	
D113	MT25.6JC	ZENER ROHM	
D115	MT213JC	ZENER ROHM	
D116	MT213JC	ZENER ROHM	
D117	MT26.8JC	ZENER ROHM	
D211	SLR-331VR50F070	L.E.D. ROHM	
D212	SLR-331DU50F070	L.E.D. ROHM	
D213	SLR-331DU50F070	L.E.D. ROHM	
D214	SLR-331DU50F070	L.E.D. ROHM	
D215	SLR-331DU50F070	L.E.D. ROHM	
D216	SLR-34YC50F165	L.E.D. ROHM	
D217	SLR-34YC50F165	L.E.D. ROHM	
D218	SLR-34DC50F165	L.E.D. ROHM	
D219	SLR-34DC50F165	L.E.D. ROHM	
D220	SLR-34DC50F165	L.E.D. ROHM	
D221	MT25.1JC	ZENER ROHM	

Δ : SAFETY PARTS

Capacitors

ITEM	PART NUMBER	DESCRIPTION	AREA
C001	QC19038-103	0.01MF CERAMIC	F
C101	QCB1HK-471	470PF 50V CERAMIC	E
C102	QCB1HK-471	470PF 50V CERAMIC	E
C103	QCB1HK-471	470PF 50V CERAMIC	E
C104	QCB1HK-471	470PF 50V CERAMIC	E

Capacitors

ITEM	PART NUMBER	DESCRIPTION	AREA
C105	QCB1HK-221	220PF 50V CERAMIC	E
C106	QCB1HK-221	220PF 50V CERAMIC	E
C107	QCB1HK-221	220PF 50V CERAMIC	E
C108	QCB1HK-221	220PF 50V CERAMIC	E
C109	QCB1HK-221	220PF 50V CERAMIC	E
C110	QCB1HK-221	220PF 50V CERAMIC	E
C111	QCB1HK-331	330PF 50V CERAMIC	E
C112	QCB1HK-331	330PF 50V CERAMIC	E
C113	QFV81HJ-103	0.01MF 50V T. FILM	
C114	QCHB1EZ-223	0.022MF 25V CERAMIC	
C121	QCB1HK-221	220PF 50V CERAMIC	E
C122	QCB1HK-221	220PF 50V CERAMIC	E
C125	QCB1HK-221	220PF 50V CERAMIC	E
C126	QCB1HK-221	220PF 50V CERAMIC	E
C131	QETB1EM-107	100MF 25V ELECTRO	
C132	QETB1EM-107	100MF 25V ELECTRO	
C133	QETB1EM-106	10MF 25V ELECTRO	
C146	QFN81HJ-562	5600PF 50V MYLAR	
C147	QETB0JM-228	2200MF 6.3V ELECTRO	
C148	QFN81HJ-562	5600PF 50V MYLAR	
C149	QFN81HK-473	0.047MF 50V MYLAR	
C150	QETB1HM-225	2.2MF 50V ELECTRO	
C152	QETB1CM-226	22MF 16V ELECTRO	
C153	QETB1HM-475	4.7MF 50V ELECTRO	
C154	QETB1CM-107	100MF 16V ELECTRO	
C155	QETB1HM-474	0.47MF 50V ELECTRO	
C156	QETB1HM-475	4.7MF 50V ELECTRO	
C161	EEZ5009-106	10MF ELECTRO	
C162	EEZ5009-106	10MF ELECTRO	
C163	EEZ5009-106	10MF ELECTRO	
C164	EEZ5009-106	10MF ELECTRO	
C201	QFV81HJ-333	0.033MF 50V T. FILM	
C202	QFV81HJ-333	0.033MF 50V T. FILM	
C303	QCS21HJ-151	150PF 50V CERAMIC	
C304	QCS21HJ-151	150PF 50V CERAMIC	
C305	QFN81HK-103	0.01MF 50V MYLAR	
C306	QFN81HK-103	0.01MF 50V MYLAR	
C309	QFN81HK-392	3900PF 50V MYLAR	
C310	QFN81HK-392	3900PF 50V MYLAR	
C311	QFN81HK-822	8200PF 50V MYLAR	
C312	QFN81HK-822	8200PF 50V MYLAR	
C313	QCS21HJ-101	100PF 50V CERAMIC	E
C313	QCS21HJ-680	68PF 50V CERAMIC	D
C313	QCS21HJ-680	68PF 50V CERAMIC	F
C314	QCS21HJ-101	100PF 50V CERAMIC	E
C314	QCS21HJ-680	68PF 50V CERAMIC	D
C314	QCS21HJ-680	68PF 50V CERAMIC	F
C317	QETB0JM-228	2200MF 6.3V ELECTRO	
C318	QETB0JM-228	2200MF 6.3V ELECTRO	
C319	QFN81HJ-472	4700PF 50V MYLAR	
C320	QFN81HJ-472	4700PF 50V MYLAR	
C321	QCS21HJ-331	330PF 50V CERAMIC	
C322	QCS21HJ-331	330PF 50V CERAMIC	
C323	QFN81HJ-153	0.015MF 50V MYLAR	
C324	QFN81HJ-153	0.015MF 50V MYLAR	
C325	QFN81HJ-272	2700PF 50V MYLAR	
C326	QFN81HJ-272	2700PF 50V MYLAR	
C327	EEZ5009-106	10MF ELECTRO	
C328	EEZ5009-106	10MF ELECTRO	
C329	QFN81HJ-222	2200PF 50V MYLAR	E
C330	QFN81HJ-222	2200PF 50V MYLAR	E
C501	QFN81HK-153	0.015MF 50V MYLAR	
C502	QFN81HK-153	0.015MF 50V MYLAR	
C503	QFN81HK-823	0.082MF 50V MYLAR	
C504	QFN81HK-823	0.082MF 50V MYLAR	
C505	QEN51HM-475	4.7MF 50V NON POLE	
C506	QEN51HM-475	4.7MF 50V NON POLE	
C511	QFN81HK-332	3300PF 50V MYLAR	
C512	QFN81HK-332	3300PF 50V MYLAR	
C513	QFN81HK-183	0.018MF 50V MYLAR	
C514	QFN81HK-183	0.018MF 50V MYLAR	
C515	QCS21HJ-221	220PF 50V CERAMIC	
C516	QCS21HJ-221	220PF 50V CERAMIC	
C517	QFN81HK-122	1200PF 50V MYLAR	
C518	QFN81HK-122	1200PF 50V MYLAR	

Δ : SAFETY PARTS

Resistors

ITEM	PART NUMBER	DESCRIPTION	AREA
R101	QRD167J-105	1M 1/6W CARBON	
R102	QRD167J-105	1M 1/6W CARBON	
R103	QRD167J-105	1M 1/6W CARBON	
R104	QRD167J-105	1M 1/6W CARBON	
R105	QRD167J-105	1M 1/6W CARBON	
R106	QRD167J-105	1M 1/6W CARBON	
R107	QRD167J-105	1M 1/6W CARBON	
R108	QRD167J-105	1M 1/6W CARBON	
R109	QRD167J-105	1M 1/6W CARBON	

Resistors

△	ITEM	PART NUMBER	DESCRIPTION			AREA
	R110	QRD167J-105	1M	1/6W	CARBON	
	R111	QRD167J-471	470	1/6W	CARBON	
	R112	QRD167J-471	470	1/6W	CARBON	
	R113	QRD167J-471	470	1/6W	CARBON	
	R114	QRD167J-471	470	1/6W	CARBON	
	R115	QRD167J-471	470	1/6W	CARBON	
	R116	QRD167J-471	470	1/6W	CARBON	
	R117	QRD167J-471	470	1/6W	CARBON	
	R118	QRD167J-471	470	1/6W	CARBON	
	R119	QRD167J-471	470	1/6W	CARBON	
	R120	QRD167J-471	470	1/6W	CARBON	
△	R123	QRZ0077-101	100	1/4W	FUSIBLE	
△	R124	QRZ0077-101	100	1/4W	FUSIBLE	
	R126	QRD167J-104	100K	1/6W	CARBON	
	R127	QRD167J-104	100K	1/6W	CARBON	
	R131	QRD167J-103	10K	1/6W	CARBON	
	R132	QRD167J-103	10K	1/6W	CARBON	
	R133	QRD167J-102	1K	1/6W	CARBON	
	R134	QRD167J-103	10K	1/6W	CARBON	
	R135	QRD167J-474	470K	1/6W	CARBON	
	R136	QRD167J-562	5.6K	1/6W	CARBON	
	R137	QRD167J-473	47K	1/6W	CARBON	
	R138	QRD167J-392	3.9K	1/6W	CARBON	
	R139	QRD167J-104	100K	1/6W	CARBON	
	R140	QRD167J-104	100K	1/6W	CARBON	
	R141	QRD167J-223	22K	1/6W	CARBON	
	R143	QRD167J-102	1K	1/6W	CARBON	
	R144	QRD167J-102	1K	1/6W	CARBON	
	R146	QRD167J-122	1.2K	1/6W	CARBON	
	R147	QRD167J-473	47K	1/6W	CARBON	
	R148	QRD167J-273	27K	1/6W	CARBON	
	R149	QRD167J-471	470	1/6W	CARBON	
	R150	QRD167J-471	470	1/6W	CARBON	
	R151	QRD167J-105	1M	1/6W	CARBON	
	R152	QRD167J-105	1M	1/6W	CARBON	
	R153	QRD167J-471	470	1/6W	CARBON	
	R154	QRD167J-471	470	1/6W	CARBON	
	R155	QRD167J-105	1M	1/6W	CARBON	
	R156	QRD167J-105	1M	1/6W	CARBON	
	R157	QRD167J-333	33K	1/6W	CARBON	
	R158	QRD167J-333	33K	1/6W	CARBON	
	R171	QRD167J-473	47K	1/6W	CARBON	
	R172	QRD167J-473	47K	1/6W	CARBON	
	R173	QRD167J-474	470K	1/6W	CARBON	
	R174	QRD167J-474	470K	1/6W	CARBON	
	R201	QRD167J-223	22K	1/6W	CARBON	
	R202	QRD167J-223	22K	1/6W	CARBON	
	R205	QVDB87M-EF5B	250K		VARIABLE	
	R211	QVDBA7B-AF5VA	250K		VARIABLE	
	R251	QRD167J-122	1.2K	1/6W	CARBON	
	R252	QRD167J-122	1.2K	1/6W	CARBON	
	R253	QRD167J-122	1.2K	1/6W	CARBON	
	R254	QRD167J-122	1.2K	1/6W	CARBON	
	R255	QRD167J-122	1.2K	1/6W	CARBON	
	R256	QRD167J-122	1.2K	1/6W	CARBON	
	R257	QRD167J-122	1.2K	1/6W	CARBON	
	R258	QRD167J-122	1.2K	1/6W	CARBON	
	R259	QRD167J-122	1.2K	1/6W	CARBON	
	R260	QRD167J-122	1.2K	1/6W	CARBON	
	R261	QRD167J-122	1.2K	1/6W	CARBON	
	R262	QRD167J-112	1.1K	1/6W	CARBON	
	R263	QRD167J-102	1K	1/6W	CARBON	
	R264	QRD167J-122	1.2K	1/6W	CARBON	
	R265	QRD167J-104	100K	1/6W	CARBON	
	R301	QRD167J-331	330	1/6W	CARBON	E
	R302	QRD167J-331	330	1/6W	CARBON	E
	R303	QRD167J-473	47K	1/6W	CARBON	
	R304	QRD167J-473	47K	1/6W	CARBON	
	R305	QRD167J-471	470	1/6W	CARBON	
	R306	QRD167J-471	470	1/6W	CARBON	
	R307	QRD167J-5R6	5.6	1/6W	CARBON	
	R308	QRD167J-5R6	5.6	1/6W	CARBON	
	R309	QRD167J-101	100	1/6W	CARBON	
	R310	QRD167J-101	100	1/6W	CARBON	
	R311	QRD167J-562	5.6K	1/6W	CARBON	
	R312	QRD167J-562	5.6K	1/6W	CARBON	
	R313	QRD167J-270	27	1/6W	CARBON	
	R314	QRD167J-270	27	1/6W	CARBON	
	R315	QRD167J-561	560	1/6W	CARBON	
	R316	QRD167J-561	560	1/6W	CARBON	
	R317	QRD167J-562	5.6K	1/6W	CARBON	
	R318	QRD167J-562	5.6K	1/6W	CARBON	
	R319	QRD167J-222	2.2K	1/6W	CARBON	
	R320	QRD167J-222	2.2K	1/6W	CARBON	
	R321	QRD167J-272	2.7K	1/6W	CARBON	
	R322	QRD167J-272	2.7K	1/6W	CARBON	

Resistors

△	ITEM	PART NUMBER	DESCRIPTION			AREA
	R323	QRD167J-273	27K	1/6W	CARBON	
	R324	QRD167J-273	27K	1/6W	CARBON	
	R325	QRD167J-273	27K	1/6W	CARBON	
	R326	QRD167J-273	27K	1/6W	CARBON	
	R327	QRD167J-180	18	1/6W	CARBON	
	R328	QRD167J-180	18	1/6W	CARBON	
	R329	QRD167J-221	220	1/6W	CARBON	
	R330	QRD167J-221	220	1/6W	CARBON	
	R331	QRD167J-153	15K	1/6W	CARBON	
	R332	QRD167J-153	15K	1/6W	CARBON	
	R333	QRD167J-184	180K	1/6W	CARBON	
	R334	QRD167J-184	180K	1/6W	CARBON	
	R335	QRD167J-471	470	1/6W	CARBON	
	R336	QRD167J-471	470	1/6W	CARBON	
	R337	QRD167J-104	100K	1/6W	CARBON	
	R338	QRD167J-104	100K	1/6W	CARBON	
	R363	QRD167J-471	470	1/6W	CARBON	
	R364	QRD167J-471	470	1/6W	CARBON	
	R401	QRD167J-823	82K	1/6W	CARBON	
	R402	QRD167J-823	82K	1/6W	CARBON	
	R403	QRD167J-103	10K	1/6W	CARBON	
	R404	QRD167J-103	10K	1/6W	CARBON	
	R501	QVDB87C-E15B	100K		VARIABLE	
	R503	QRD167J-203	20K	1/6W	CARBON	
	R504	QRD167J-203	20K	1/6W	CARBON	
	R505	QRD167J-362	3.6K	1/6W	CARBON	
	R506	QRD167J-362	3.6K	1/6W	CARBON	
	R511	QVDB87C-E15B	100K		VARIABLE	
	R513	QRD167J-472	4.7K	1/6W	CARBON	
	R514	QRD167J-472	4.7K	1/6W	CARBON	
	R515	QRD167J-821	820	1/6W	CARBON	
	R516	QRD167J-821	820	1/6W	CARBON	

△ : SAFETY PARTS

Others

△	ITEM	PART NUMBER	DESCRIPTION			AREA
		E11944-004	CIRCUIT BOARD			
		E305983-001	HOLDER			
		E65508-002	TAB			
		QSR0085-009	VOLTAGE SELECTOR			F
△	J001	QMC0637-004	AC OUTLET			F
	J101	EMN00TV-408A	4P PIN JACK			
	J102	EMN00TV-407A	4P PIN JACK			
	J103	EMN00TV-407A	4P PIN JACK			
	J104	EMN00TV-408A	4P PIN JACK			
	L301	EQL4004-270	INDUCTOR			E
	L302	EQL4004-270	INDUCTOR			E
	L303	EQL4004-220	INDUCTOR			E
	L304	EQL4004-220	INDUCTOR			E
	S101	QSS1J46-E01	SLIDE SWITCH			
	S201	ESP0001-018	TACT SWITCH			
	S202	ESP0001-018	TACT SWITCH			
	S203	ESP0001-018	TACT SWITCH			
	S204	ESP0001-018	TACT SWITCH			
	S205	ESP0001-018	TACT SWITCH			
	S206	QSTL451-E01	PUSH SWITCH			
	S210	QSTL101-E05	PUSH SWITCH			
	S401	QSTL101-E01	PUSH SWITCH			
	FW104	EWR23C-35NN	FLAT WIRE			
	FW105	EWR23C-30NN	FLAT WIRE			
	FW106	EWR33B-35SST	FLAT WIRE			
	FW109	EWR39B-20LST	FLAT WIRE			
	FW110	EWR23C-40NN	FLAT WIRE			
	FW111	EWR23C-16NN	FLAT WIRE			
	FW113	EWR34B-20SST	FLAT WIRE			
	FW401	EWR35B-20SST	FLAT WIRE			
	FW701	EWR23C-13LN	FLAT WIRE			
	FW702	EWR33B-13LST	FLAT WIRE			
	FW703	EWR37B-40LST	FLAT WIRE			
	FW801	EWR33B-10LST	FLAT WIRE			
	FW802	EWR33B-20LST	FLAT WIRE			
	JT109	EMV7122-004	CONNECTOR			
	JT110	EMV7122-005	CONNECTOR			
	RT006	E67764-302	WRAPPING TERMINAL			F
	RT007	E67764-303	WRAPPING TERMINAL			F
	RT008	E67764-303	WRAPPING TERMINAL			F
	RT009	E67764-303	WRAPPING TERMINAL			F
	RT010	E67764-402	WRAPPING TERMINAL			F

△ : SAFETY PARTS

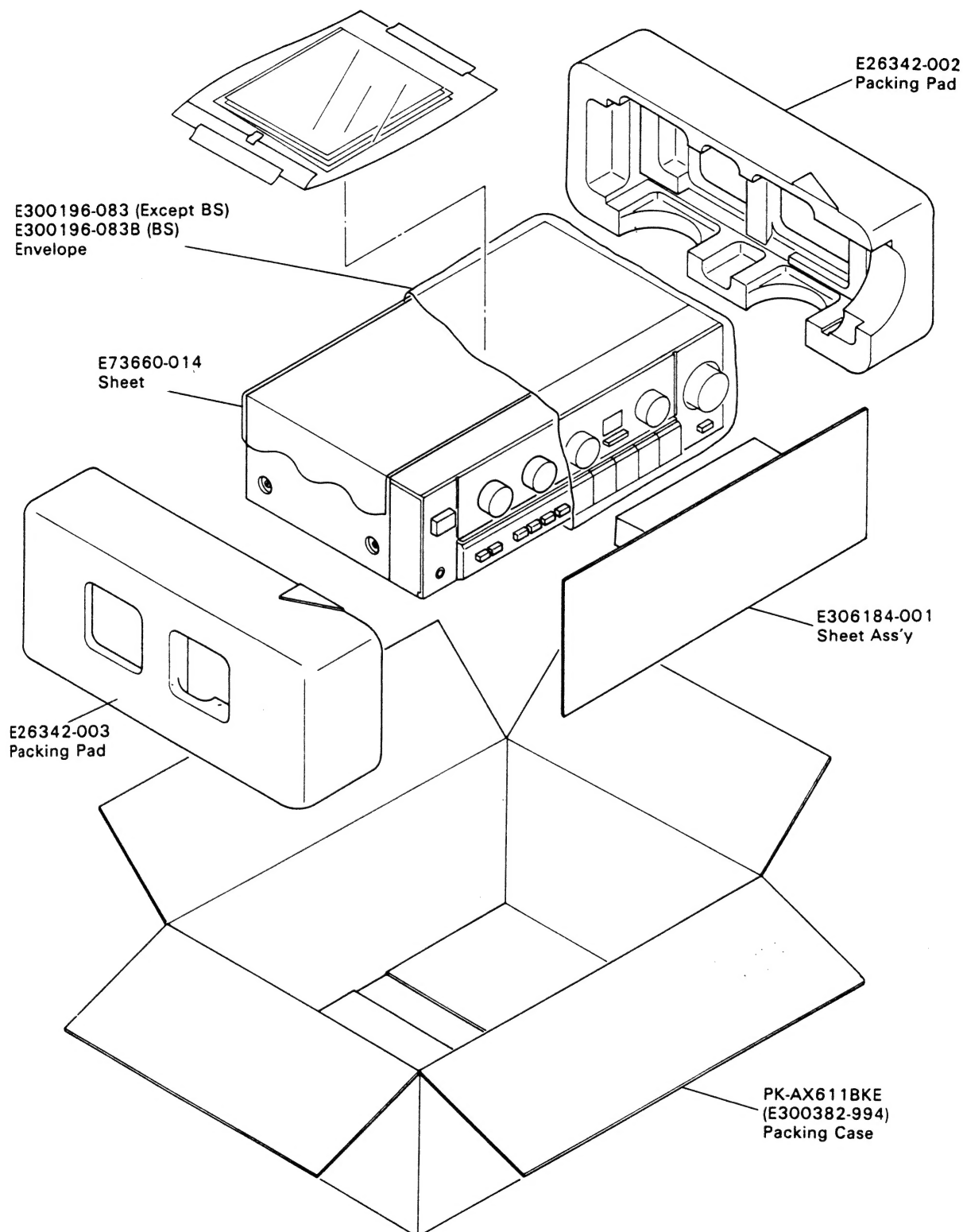
Accessories List

⚠	Part Number	Part Name	Q'ty	Description	Areas
	E30580-1518A E30580-1518ABS BT20025K BT20029C BT20098	Instruction Book Instruction Book Warranty Card Warranty Card Warranty Card	1 1 1 1 1	for Australia for New Zealand	Except BS BS C A A
	BT20064A BT20060 BT20066A BT20071A BT20044F	Warranty Card Warranty Card EEC Agency Service Center Rist Safety Instruction Sheet	1 1 1 1 1		G BS G, BS C J
	E43486-340A QZL1008-001 E72360-001 BT20048C BT20108	Safety Sheet FTZ Information Sheet Caution Sheet Warranty Card Service Information	1 1 1 1 1		BS G C J J
⚠	E66416-003 E04056 E35497-019 E41202-2 E41202-2B	Envelope Siemens Plug Caution Sheet Envelope Envelope	1 1 1 1 1	for Warranty Card	J U U Except BS BS

⚠: Safety Parts

The Marks for Designated Areas	
J.....the U.S.A	E, EF..... Continental Europe
C.....Canada	BS..... the U.K.
A.....Australia	U..... Other Countries
G.....West Germany	No mark indicates all areas.

Packing Materials and Part Numbers



The Marks for Designated Areas

J.....the U.S.A	E, EF..... Continental Europe
C.....Canada	BS..... the U.K.
A.....Australia	U.....Other Countries
G.....West Germany	No mark indicates all areas.

MEMO